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Subsite:	
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Southern Wood Piedmont Company

June 23, 1999

Mr. Stuart F. Parker, Jr., Hydrogeologist
North Carolina Superfund Section
401 Oberlin Road, Suite 150
Raleigh, NC 27605-1350

Re: Administrative Order On Consent, Docket No. 97-SF-117
Remedial Investigation Report
SWP – Wilmington, NC; NCD058517467

Dear Mr. Parker:

The enclosed Remedial Investigation Report is being submitted according to the terms of Section VI.A of the May 24, 1999 Administrative Order on Consent for the SWP – Wilmington site. The submission includes four copies of the twelve volume report.

Southern Wood Piedmont Company is pleased to provide this report and move forward under the terms of the order. If you have questions or comments regarding the report please contact me at the above letterhead, or at 864-599-1070, extension 103.

Sincerely,

W. P. Arrants
Manager of Environmental Affairs/
Regulatory Compliance

CC: M. D. Pruett w/o
M. J. Berger w/o
S. Earp w/o
G. B. Kuntz – Schnabel

4280bw

Remedial Investigation

Southern Wood Piedmont Company
and
North Carolina State Ports Authority Site
Wilmington, New Hanover County, North Carolina

Prepared For

Southern Wood Piedmont Company
Spartanburg, South Carolina

Prepared By

Schnabel Engineering

June 24, 1999

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LIST OF ABBREVIATIONS

1985 AOC	1985 Administrative Order on Consent
1999 AOC	1999 Deferral Administrative Order on Consent
AVS-SEM	Acid Volatile Sulfide-Simultaneous Extractable Metals
BIO	Biological Sample
BVSPC	Black & Veatch Special Projects Corporation
CCA	Chromium, Copper, & Arsenic
CERCLA	Comprehensive Environmental Response Compensation Liability Act
CLP	Contract Laboratory Program
COW	City of Wilmington
CPAH	Carcinogenic Polynuclear Aromatic Hydrocarbons
DE	Disposable Equipment
DNAPL	Dense Non-Aqueous Phase Liquid
DW	Dry Weight
DWQ	Division of Water Quality
EES	Environmental Epidemiology Section
EISOPQAM	Environmental Investigations Standard Operating Procedures & Quality Assurance Manual
ERA	Ecological Risk Assessment
ESI	Expanded Site Investigation
ETE	Environmental Technology Engineering
FIT	Field Investigation Team
G&M	Geraghty & Miller
H&S	Health and Safety Plan
HI	Hazard Index
HRS	Hazard Ranking System
IDW	Investigation Derived Waste
IMAC	Interim Maximum Allowable Standard
KG	Kilograms
L	Liters
LECR	Lifetime Excess Cancer Risk
LES	Law Environmental Services
LF1	Landfarm One
LF2	Landfarm Two
MCL	Maximum Concentration Limit
MCLG	Maximum Concentration Limit Goal
MDL	Method Detection Limit
MG	Milligrams
MW	Monitoring Well
NCDEHNR	North Carolina Department of Environment, Health, and Natural Resources
NCDENR	North Carolina Department of Environment and Natural Resources
NCDHR	North Carolina Department of Human Resources
NCSPA	North Carolina State Ports Authority
NPDES	National Pollution Discharge Elimination System

LIST OF ABBREVIATIONS (cont.)

NTA	Non-Treated Wood Storage Area A
NTB	Non-Treated Wood Storage Area B
NUS	Halliburton Corporation
PA	Preliminary Assessment
PAHs	Polynuclear Aromatic Hydrocarbons
PCDDs	Polychlorinated Dibenzodioxins
PCDFs	Polychlorinated Dibenzofurans
PCP	Pentachlorophenol
PDA	Production Area
PNAs	Primary Nursery Areas
POTW	Publicly Owned Treatment Works
PE	Personal Protective Equipment
PPE	Probable Point of Entry
PPM	Part Per Million
PSI	Photogrammetric Services, Inc.
RBC	Risk-Based Concentration Table
RCRA	Resource Conservation Recovery Act
RECIG	Registered Environmental Consultant Implementation Guidance
RI	Remedial Investigation
S&A	Sampling and Analysis Plan
S&ME	Soil & Material Engineers, Inc.
SB	Subsurface Soil Sample
SD	Sediment Sample
SIP	Site Inspection Prioritization
SS	Soil Sample
SSI	Site Screening Investigation
SOP	Standard Operating Procedures
SVOC	Semi-Volatile Organic Compounds
SW	Surface Water Sample
SWP	Southern Wood Piedmont
TCDD	2,3,7,8-Tetrachlorodibenzodioxins
TEF	Toxicity Equivalent Function
TEQ	Toxicity Equivalent Quotient
TOC	Total Organic Carbon
TPAH	Total Polynuclear Aromatic Hydrocarbons
TWSA	Treated Wood Storage Area A
TWSB	Treated Wood Storage Area B
QAP	Quality Assurance Plan
VOC	Volatile Organic Compounds
UG	Micrograms
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey

REMEDIAL INVESTIGATION
SOUTHERN WOOD PIEDMONT COMPANY AND
NORTH CAROLINA STATE PORTS AUTHORITY SITE
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

EXECUTIVE SUMMARY

This remedial investigation report (RI) was prepared following the deferral Administrative Order on Consent (AOC) dated May 24, 1999 pursuant to N.C.G.S. 130A-310.9(b) and the Superfund State Deferral Memorandum of Agreement (September 9, 1997) for the Southern Wood Piedmont Company (NCD 058 517 467) Wilmington, North Carolina, New Hanover County site. This report fulfills Section VI. A. of the AOC.

The site was formerly identified as the Southern Wood Piedmont Company (SWP), City of Wilmington (COW), and North Carolina State Ports Authority (NCSPA) site. In June 1998 the NCSPA purchased the COW parcel. The site is now referred to as the SWP and NCSPA site. The current deed restricts the site use to industrial port-related operations. No residential or recreational uses are allowed on the site. The zoning for the site is Heavy Manufacturing (HM). The deed restriction has been listed in the New Hanover County Registry and can only be removed by an agreement signed by the USEPA and NCDENR.

Formerly the site was situated on two parcels of land that were leased over the years to various site operators. The southern parcel (44.58 acres) has been owned by NCSPA since 1968. The NCSPA leased 7 acres of the southern parcel to SWP. The COW owned the northern parcel (51.57 acres) from 1920 to 1998. The COW leased the property to Newport Shipbuilding Company, North State Creosoting Company, Taylor Colquitt Creosoting Company, Taylor Piedmont, and Southern Wood Piedmont Company. The site was used for wood treating operations for 37 years prior to SWP managing the site. Active wood-treating operations were managed by SWP for 14 years (until 1983).

The site is located within a portion of the City that has historically (last 100 years) been developed with heavy industrial and manufacturing facilities. Historical operations on and around the site include lumber mills, ship building activities, general warehousing activities, wood preservation, turpentine production, paint formulation, bulk storage of petroleum and chemicals, coal gasification, and petroleum refining activities. Most of the riverfront area has been significantly altered from its natural state by these and other historical activities.

Hazardous substances used on site for preserving wood included creosote, chromated copper arsenate (CCA), and pentachlorophenol (PCP) in diesel fuel. Prior to 1972 creosote was the only wood-preserving chemical used at the site. CCA was introduced as a wood-preservative in 1972. SWP began using PCP in 1980. Dioxins may be present as a contaminant in the pentachlorophenol used at the site.

Over the 51-year life of the facility soil adjacent to process areas became contaminated. Identified waste disposal areas include: 1) a covered ditch containing creosote sludge, 2) a trash dump area with suspected creosote material, 3) the dike area where solid creosote residuals were

used to seal the dike, and 4) a trashfill area at the north slip that contains a small amount of creosote. Identified operating area deposits include: 1) the track area in front of the creosote/PCP treatment cylinder, 2) the area around both creosote treating buildings, working tanks, and the wastewater/oil recovery tank system, 3) the large storage tank containment area, 4) treated product storage areas, 5) the CCA treatment and storage tank area, and 6) the storage tank sludge in the bottom of various tanks.

There are three regional aquifers present throughout most of New Hanover County. The regional aquifers are the Upper Sandy Aquifer System, the Limestone Aquifer, and the Lower Sandy Aquifer System. The Limestone Aquifer (Castle Hayne Formation) was not deposited in the vicinity of the site. Locally three aquifers, a semi-confining unit, and a confining unit have been identified. Two of the aquifers (shallow and intermediate aquifers) and the semi-confining unit (peat) make up the Upper Sandy Aquifer System (to a depth of 46 feet below land surface). The confining clay and a sandy limestone aquifer (deep aquifer) make up the upper portion of the Lower Sandy Aquifer System (46 to 81 feet below land surface).

Groundwater flow in the shallow and intermediate aquifers is to the south along an elongate mound that extends from the northeast corner of the site to the south central portion of the site. From the central mound groundwater flows to the northwest in the vicinity of the landfarm, to the west along the Cape Fear River, to the south along Greenfield Creek, and to the east along the drainage ditch. Groundwater flow east of the site is to the west toward the drainage ditch. Groundwater flow in the deep aquifer is to the west-southwest toward the Cape Fear River.

Groundwater is not used as a municipal water supply in Wilmington. There are no groundwater users within a 2-mile radius of the site. Because the site is located adjacent to the brackish Cape Fear River, the shallow aquifer contains saline water. Chloride concentrations in the intermediate aquifer indicate fresh water is present. The chloride concentration has not been measured in the deep aquifer. Literature studies suggest that the groundwater is fresh to a depth of 225 feet below land surface. Below this depth salt water intrusion has occurred.

Environmentally sensitive areas on and adjacent to the site include: 1) Designated and Proposed Federal and State Wilderness and Natural Areas - the Brunswick River/Cape Fear River and the Lower Cape Fear River Bird Nesting Islands (dredge spoil islands); 2) Recreational Areas - the Cape Fear River and Greenfield Creek; 3) Aquatic Habitat - the Lower Cape Fear River; 4) Threatened and/or Endangered Animal Species - federally rare Shortnose Sturgeon and Manatee, federally threatened *Alligator Mississippiensis*, federal species of concern Rare Skipper butterfly, state significantly rare marine and estuarine fishes Freckled Blenny, Spinycheek Sleeper, Oppossum Pipefish, and Marked Goby, state special concern species Least Killfish, and the state endangered Barrel Floater, Magnificent Ramshorn, and Greenfield Ramshorn Snail; 5) Threatened Plant Species - rare plant species Snowy Orchid, Carolina Grasswort, Dwarf Bladderwort, and Spoonflower; 6) Areas Important to Maintenance of Unique Biotic Communities - Cape Fear River; and 7) Wetlands -0.45 miles of wetland frontage along the drainage ditch and 170 miles along the Cape Fear River System and Greenfield Creek, and 10 acres of wetlands on site.

The site drains to the Cape Fear River directly and via a drainage ditch and Greenfield Creek. The upper end of the drainage ditch is one of multiple probable points of entry (PPEs) to the

surface water pathway, but it is the primary one, draining the majority of the site. Runoff from the jetty area and from the western portion of the site is to the Cape Fear River via a second PPE along the southern boat slip. A third PPE drains a small area located along the northern property boundary of the site. Because of extensive tidal flow reversal in the Cape Fear River and its tributaries, the surface water pathway theoretically extends 15 miles both upstream and downstream from the site. The potential for contaminant transport upstream from the site may be limited, however, by the net seaward transport of sediment in the estuary. No surface water intakes for public supply operate within 15 miles upstream or downstream of the site.

The site is currently inactive and vacant of SWP or other employees. All structures have been removed. A locking gate has been installed at the site entrance to control vehicular traffic. The site is accessible on foot or by boat. The nearest residences are 400 feet east of the site. The total population residing within 0.25 miles of the site is estimated to be 527. No schools or day care facilities are present within 0.2 miles of the site. A recreation field (Optimist Park) is located directly southeast of the site but is separated from the site by a railroad grade, by thick vegetation, and by the on-site drainage ditch.

Preliminary remediation goals were used to delineate the horizontal and vertical extent of constituents in the soil, subsurface soil, sediment, groundwater and surface water on and adjacent to the site. The preliminary remediation goals are for unrestricted site use. The final remediation goals should be based on restricted site use. Final remediation goals will be determined in cooperation with NCDENR prior to remedy selection at the site.

Constituents that exceeded preliminary remedial action goals for each media since sampling was initiated (1981) at the site are summarized below:

CONSTITUENTS	SOIL	GROUNDWATER	SEDIMENT	SURFACE WATER
Semi-Volatiles				
2,4-Dimethylphenol		X		
2-Chloronaphthalene	X			
2-Chlorophenol	X			
2-Methylnaphthalene	X	X		
2-Methylphenol		X		
3-and/or 4-Methylphenol		X		
Acenaphthene	X	X		
Acenaphthylene	X			
Anthracene	X			
Benzo(a)anthracene	X	X	X	
Benzo perylene		X		
Benzo(a)pyrene	X	X	X	
Benzo(b)fluoranthene	X	X	X	
Benzo(b,k)fluoranthene	X	X		
Benzo(k)fluoranthene	X	X		
Benzo(g,h,i)perylene	X			
Carbazole	X	X	X	
Chrysene	X	X		

CONSTITUENTS	SOIL	GROUNDWATER	SEDIMENT	SURFACE WATER
Semi-Volatiles (continued)				
Cresol m&p		X		
Dibenzo(a,h)anthracene	X	X	X	
Dibenzofuran	X	X		
Fluoranthene	X	X	X	
Fluorene	X	X		
Indeno(1,2,3-cd)pyrene	X	X	X	
Naphthalene	X	X		
Pentachlorophenol	X	X		
Phenanthrene	X	X		
Pyrene	X	X		
Tetrachlorophenols	X			
Volatiles				
1,1,2,2-Tetrachloroethane		X		
1,1,2-Trichloroethane		X		
Acetone		X		
Benzene		X		
Bromodichloromethane		X		
Chloroform		X		
Ethylbenzene		X		
Methylene Chloride		X		
Inorganics				
Aluminum	X	X	X	
Antimony	X			
Arsenic	X	X	X	
Barium	X			
Cadmium	X	X		
Chromium	X	X		
Cobalt	X			
Copper	X		X	X
Cyanide	X			
Iron	X	X	X	X
Lead	X	X		
Manganese	X	X		
Mercury	X			
Nickel	X			
Vanadium	X	X		
Zinc	X			
Pesticides/PCBs				
4,4'-DDD	X			
4,4'-DDE	X			
4,4'-DDT	X			

CONSTITUENTS	SOIL	GROUNDWATER	SEDIMENT	SURFACE WATER
Pesticides/PCBs (cont.)				
Aldrin	X			
Alpha-chlordane		X		X
Gamma-BHC (Lindane)	X			
Heptachlor	X			
PCB-1260 (Aroclor-1260)	X			X
Dioxins and Furans				
Toxicity Equivalent Value	X			

Preliminary soil remediation goals have been exceeded in the treated wood storage areas, non-treated wood storage areas, landfarm area, production area, covered ditch and adjacent to Greenfield Creek. Inorganic concentrations appear to be naturally occurring, except along the drip track in front of the former CCA treatment area.

Exposure to contaminated soil can only occur at the site property. Contaminant concentrations in the on-site soils are generally in the parts per million and are not concentrated enough to produce measurable air pollution. Site access is controlled. Future construction/excavation could potentially expose on-site workers to site contaminants, requiring safety monitoring.

Preliminary sediment remediation goals have been exceeded along the length of the on site drainage ditch and Greenfield Creek. Sediment remediation goals have also been exceeded along the bank of the southern slip in the Cape Fear River.

All of the surface water samples have historically been below laboratory detection limits except for toluene, arsenic, and copper. However, all detected constituents have been below the Class SC surface water standards.

The surface water pathway (sediment) is the primary human health and environmental concern at the site. Sediments in the drainage ditch and Greenfield Creek contain creosote compounds. There is possible creosote contamination in river sediment at the site waterfront and at the mouth of Greenfield Creek. The surface water pathway concerns include: 1) possible buildup of contaminants in fish/other animals in Greenfield Creek, 2) fishing in Greenfield Creek, 3) wetlands along the drainage ditch and Greenfield Creek, and 4) fish, wetlands, and rare species along the Cape Fear River. Exposure to contaminated sediment can occur only along the bottom of the drainage ditch or lower Greenfield Creek.

Free product creosote has accumulated at the base of the upper sand aquifer, 10 to 15 feet beneath the production area and the covered ditch.

Four groundwater plumes are present on and adjacent to the site. On-site plumes originate from the landfarm, the large storage tank area, and the wood treatment area. The wood treatment area includes the CCA, PCP, and creosote treatment areas and the covered ditch. Constituents from the former wood treatment area appear to have migrated to the drainage ditch and Greenfield Creek.

The landfarm plume is inorganic (arsenic and chromium). The lateral extent is defined side-gradient and upgradient of the landfarm. The downgradient extent has not been confirmed but is likely defined by the drainage ditch along the northern property boundary of the site. The vertical extent is limited to the shallow aquifer.

The large storage tank plume is small and indicated by residual product adjacent to the southern slip. The lateral extent is defined in all directions. The Cape Fear River intersects the downgradient extent of the plume. The vertical extent is defined with the plume being contained in the shallow aquifer at the site.

The lateral extent of the wood treatment plume is defined upgradient, sidegradient to the west, and downgradient in the central portion of the site for the shallow and intermediate aquifers. The downgradient and sidegradient extent has not been defined along the southern portion of the drainage ditch and along Greenfield Creek both on and off site. The vertical extent has not been defined in the deep aquifer in the central portion of the site and along Greenfield Creek.

An off-site plume, not related to site activities, is located adjacent to the former City of Wilmington wastewater treatment facility (currently is a lift station). Raw sewage was discharged to the Cape Fear River through a shallow 24-inch diameter pipe at this location. This off-site plume has not been defined laterally. The vertical extent appears to be limited to the shallow aquifer.

The groundwater pathway is of secondary concern at the site due to no impact on drinking water and no indication of migration from groundwater to surface water in the area.

Air monitoring has occurred only during active subsurface exploration, when recovered soil samples were screened in the field for the presence of volatile organic compounds. Elevated volatiles were detected, however, the detected volatiles were at depth. Dioxin and arsenic residues on site are not volatile and do not present an air-pollution hazard. Creosote in undisturbed soil at the site is not concentrated enough to produce measurable air pollution. The site is vegetated and no odors or visual evidence of wood-preserving materials or blowing particles have been observed.

A human health risk assessment was completed for the site. Theoretical upper-bound incremental lifetime cancer risks and non-cancer hazards were evaluated for three hypothetical future use scenarios where a human would possibly be in contact with or affected by the environmental conditions at the site. The three scenarios evaluated included: 1) construction/utility repair worker, 2) adolescent trespasser, and 3) recreational angler. Results from the evaluation indicated that carcinogenic risks for the typical exposed individual ranged from 3.0×10^{-6} to 1.5×10^{-5}, and risks for the high end exposed individual were estimated within the range of 7.2×10^{-6} to 6.6×10^{-5}. Comparison with EPA's acceptable cancer risk range of 1×10^{-6} to 1×10^{-4} indicates that human health risks associated with the site are insignificant. All noncancer hazards were below the noncancer hazard index (HI) risk benchmark of 1, indicating that site-related constituents do not pose a noncancer human health hazard.

A screening-level ecological risk assessment (ERA) completed for the site concluded that the ecological risks from the chemicals of concern are limited to sediment PAHs. Based on the ERA, the potential risks from PAH exposure via bioaccumulation are insignificant for higher trophic organisms. Hazard quotients calculated for benthic macroinvertebrates indicate potential risks to this community via direct contact and ingestion of sediment PAH.

REMEDIAL INVESTIGATION
SOUTHERN WOOD PIEDMONT COMPANY AND
NORTH CAROLINA STATE PORTS AUTHORITY SITE
WILMINGTON, NEW HANOVER COUNTY, NORTH CAROLINA

This remedial investigation report (RI) was prepared following the (May 24, 1999) deferral Administrative Order on Consent (1999 AOC) pursuant to N.C.G.S. 130A-310.9(b) and Superfund State Deferral Memorandum of Agreement (September 9, 1997) for the Southern Wood Piedmont Company (NCD 058 517 467) Wilmington, North Carolina, New Hanover County site. This report fulfills Section VI. A. of the 1999 AOC. Section VI. A. states that within thirty (30) days after the execution of the 1999 AOC, Southern Wood Piedmont Company shall submit to the Division two (2) copies of a Remedial Investigation Report organized in sections corresponding to and including at least the items listed in Sections VI. D. and G. Presented below is the Remedial Investigation Report organized in sections ordered as presented in Sections VI. D. and G. of the 1999 AOC (Attachment A). Because some of the requirements in Section VI. D. are the same or similar to Section VI. G., some redundancy exists in heading titles. This was necessary to present the RI in sections that correspond to the 1999 AOC.

The site was formerly identified as the Southern Wood Piedmont Company (SWP), City of Wilmington (COW), and North Carolina State Ports Authority (NCSPA) site. In June 1998 the NCSPA purchased the COW property. The word "Site" in this report refers to the property presently owned by the NCSPA that was leased by SWP from the COW and NCSPA.

1.0 SITE LOCATION

1.1 Street Address and Geologic Coordinates

The site is located in an industrial area immediately south of downtown Wilmington, New Hanover County, North Carolina (Ref. 1 and 2, p. 3; Figure 1). Greenfield Street, which runs in an east-west direction, terminates at the site. The site address is the West Foot of Greenfield Street, Wilmington, North Carolina 28402. The geographic map coordinates of the site are 34° 12' 55" North latitude and 77° 57' 1.5" West longitude (Ref. 3).

1.2 Site and Surrounding Property Use

The site is situated on two parcels of land that were leased over the years to various site operators. Both parcels of land are currently owned by NCSPA. The southern parcel (tax map #05320, parcel #002) totals 44.58 acres (7 acres were leased to SWP) and as been owned by NCSPA since 1968. The northern parcel (tax map #05320, parcel #001) totals 51.57 acres and was purchased from the COW by NCSPA on June 18, 1998. The City of Wilmington acquired the northern parcel around 1920. The COW leased the property over the years to Newport Shipbuilding Company, North State Creosoting Company, Taylor Colquitt Creosoting Company, Taylor Piedmont, and Southern Wood Piedmont Company. The site was used for wood treating operations for 37 years prior to SWP managing the site. Active wood-treating operations were managed by SWP for 14 years (until 1983).

Currently there are no structures present and the site is inactive. Remaining on the site from previous operations are sections of unpaved and paved roads, concrete slabs, and partially buried railroad ties. The Cape Fear River marks the western property boundary (Figure 2). The Cape Fear riverfront consists of two broad boat slips, which contain the remnants of wood cribbing and piers. The site is relatively flat with the ground surface elevation ranging from 2 to 5 feet above sea level (Ref. 4, p. 4). The majority of the site is covered with short grass. The site is not open to vehicular traffic due to the presence of an entrance gate but is accessible by foot along the eastern railroad tracks and by boat from the Cape Fear River and Greenfield Creek.

Abutting the site to the north is the Amerada Hess Corporation bulk petroleum storage terminal. PakTank Atlantic Company bulk chemical storage terminal and the North Carolina State Ports Authority is located to the south and is separated from the site by Greenfield Creek. The PakTank terminal includes the former Chevron bulk asphalt terminal. Undeveloped property, owned by Frank S. McNeill, is located to the southeast of the site at the confluence of the drainage ditch and Greenfield Creek. Optimist Park, COW sewerage pump station, an automotive repair shop, and an automotive transmission repair shop lie to the east of the site. The site is separated from these facilities by an elevated railroad bed, dense vegetation, and a drainage ditch owned by the North Carolina State Ports Authority. A residential area is located approximately 400 feet to the east of Optimist Park. Black and Veatch Special Projects Corporation (BVSPC; Ref 2, p. 111) noted that two schools are located less than 0.5 miles from the site. One school is located 0.2 miles to the south of the site and a day care facility is located 0.25 mile east of the site (Ref 4, p. 27 and Ref. 5).

The site is located within a portion of the City that has historically (last 100 years) been developed with heavy industrial and manufacturing facilities. Historical operations on and around the site include lumber mills, ship building activities, general warehousing activities, wood preservation, turpentine production, paint formulation, bulk storage of petroleum and chemicals, coal gasification, and petroleum refining activities. Most of the riverfront area has been significantly altered from its natural state by these and other historical activities.

Soil and groundwater contamination incidents are common within this industrialized corridor alone the east bank of the Cape Fear River. Properties abutting and adjacent to the site are heavily developed and considering the area's history, may be contaminated with a variety of organic and inorganic constituents. Documented contamination is present along the Cape Fear River in Wilmington.

Review of information on the adjacent Amerada Hess terminal, maintained at the Wilmington Regional Office of the North Carolina Division of Environmental Management, Groundwater Section, revealed a surface spill incident involving gasoline or diesel. Documents contained in the files also indicate that the Amerada Hess facility is conducting groundwater remediation resulting from a release of fuel oil from an underground storage tank system. Quarterly groundwater monitoring reports indicate that free product is present in a monitoring well adjacent to the source of contamination.

The Chevron USA Products Company (now part of PakTank) was historically used for the storage and distribution of asphalt and petroleum naphtha. Volatile organic and polycyclic

aromatic hydrocarbons (PAHs) contamination has been identified in the soil and groundwater at this site. Groundwater direction has been reported to flow from the Chevron facility to the south, away from the site, however, it is likely that groundwater in the vicinity of Greenfield Creek and associated tributaries/drainage ditches flow to the north toward Greenfield Creek.

2.0 MANAGEMENT PRACTICE

2.1 Process Wastewater Management

No wastewater treatment information was available for previous wood-treating operators at the site. Original wastewater treatment for the SWP operation was simple settling in an aboveground tank and discharge to the surface. Sometime later (late 1960's/early 1970's) the process wastewater was settled and discharged to the Wilmington sewage treatment plant (POTW). Beginning in 1980, the settled effluent was further clarified using a Wemco flotation clarification system prior to discharge to the POTW. Oil and float that separated in the settling tanks and in the Wemco was recycled to the process or burned for fuel value in the plant wood boiler. No regulated sludge was ever generated by this treatment approach (Ref. 6).

2.2 Summary of Hazardous Waste Management

Wood-preserving operations occurred on the site from 1932 to May 1983 (Ref 2, p. 5 and 6). North State Treating Company, Taylor-Colquitt, and Taylor Piedmont operated the site from 1932 to 1969. ITT Corporation (SWP) took over operations at the site in 1969. Prior to management by SWP, the storage and disposal of waste materials is not documented. Hazardous substances used for preserving wood included coal tar creosote, chromated copper arsenate (CCA), and pentachlorophenol (PCP) in diesel fuel. Prior to 1972, creosote oil was the only wood-preserving chemical used at the site. CCA was introduced as a wood-preservative in 1972. SWP began using PCP in 1980.

The site operated separate processing production lines, one being the CCA and the other creosote/PCP treatment (Ref. 7). The CCA production line consisted of a diked treatment vessel, diked tank farm with appurtenances, and a diked drip area. Almost all drippings and spillage in this area was collected by a sump and pumped back into the tank farm. The creosote/PCP line consisted of a treatment vessel without a drip pad, diked tank farm and appurtenances, a 54,000-gallon wastewater settling tank with baffles for oil-water separation and a Wemco oil/water separator. The wastewater from the settling tank was batch dumped at a rate of 4,000 to 5,000 gallons per day to the POTW under waste treatment permit number 2652. Samples were obtained and analyzed by the POTW prior to each batch dumping. Sludge that accumulated in the bottom of storage tanks at the site were burned for fuel value or recycled to the wood-treating process.

Over the 51-year life of the facility soil adjacent to process areas became contaminated. Soil in the vicinity of the track area, both treating room buildings, and around the working tanks was contaminated with residuals to a depth of 2 feet below land surface. The soil around the wastewater/oil recovery tank and the large storage tank area was discolored to a depth of 1 foot below land surface. Soil around the CCA storage tanks was also discolored.

2.3 Treatment, Storage, and Disposal Methods of Hazardous Material

Hazardous substances were stored on-site in aboveground storage tanks (Figure 3 and 4). There were seven different configurations of aboveground storage tanks located at the site, four of which contained hazardous substances. Hazardous substances included creosote, CCA, and PCP. The large storage tanks (4 tanks), located in the southwestern portion of the site near the slips, contained creosote. Smaller work tanks were located in the creosote/PCP wood treatment area (7 tanks containing creosote and PCP) and in the CCA treatment area (4 tanks containing CCA). Two diesel fuel tanks were located on the former COW property north of the large storage tanks for locomotive fueling. A diesel fuel tank was located on the NCSPA property south of the CCA treatment area that provided diesel fuel as a carrier for PCP and as heating fuel for the wood treatment buildings. Five propane storage tanks used for office heat were located near the eastern property boundary.

Sometime in the early 1980's a report was prepared identifying four areas on site where hazardous materials were deposited. The actual report was not found during the records review for this report, however, attachments and references to this report are noted in a June 8, 1984 letter from SWP to the North Carolina Division of Health Services (Ref. 6.), in the Preliminary Assessment (Ref. 8) and in the 1985 AOC (Ref. 9). The identified areas include (Figure 5): 1) a covered ditch containing creosote sludge, 2) a trash dump area with suspected creosote material, 3) the dike area where solid creosote residuals were used to seal the dike, and 4) a trashfill area at the north slip that contains a small amount of creosote. The report also identified six operating area deposits including: 1) the track area in front of the creosote/PCP treatment cylinder, 2) the area around both creosote treating buildings, working tanks, and the wastewater/oil recovery tank system, 3) the large storage tank containment area, 4) treated product storage areas, 5) the CCA treatment and storage tank area, and 6) the storage tank sludge in the bottom of various tanks.

On May 20, 1985, SWP entered into an Administrative Order on Consent with the State of North Carolina agreeing to treat and/or dispose of creosote, PCP, and CCA contaminated soils found at the wood treating and chemical storage areas on the site (Ref. 9). In compliance with the AOC, three types of treatment and/or disposal methods were approved: 1) landfarming of creosote and PCP impacted soils, 2) excavation and off-site disposal of CCA impacted soils, tank bottom sludge, and unused creosote, and 3) excavation, stabilization, and reburial of minimally impacted CCA soils.

Landfarming was used to reduce the concentration of creosote and PCP in surface soils to acceptable levels through enhanced natural degradation. The landfarm area (approximately 5 acres) is located in the northwestern portion of the site on a former treated wood storage area (Figure 2). The landfarm area was divided into two sections (LF1 and LF2) and bermed to control run-off (Ref. 16, p. 2-1; Ref. 12, p. 2). Four groundwater monitoring wells (MW-6, MW-7, MW-8, and MW-9) were installed around the perimeter of the landfarm and lysimeters were installed beneath the landfarm to monitor soil moisture content (Ref. 9, p. 5 and Ref. 10). Soils were excavated (Ref. 11 and Ref. 12) from the covered ditch (50-75 feet wide, narrowing to 15-20 feet by the plant and 10-12 feet deep), the dike area, the northern slip trashfill area, the drip track areas (3-5 feet deep), the wood treating areas (3-5 feet deep) and adjacent treating cylinders

(12-15 feet deep), the large storage tank area (5-8 feet deep), and the diesel fueling area (3 feet deep). An estimated 672,000 cubic feet (15.4 acre-feet) of material was landfarmed (Ref. 4, p. 5). Excavations were backfilled with clean fill from a borrow pit located 10-15 miles from the site. SWP actively landfarmed the excavated soils from mid-1984 through mid-1990. The landfarming area was irrigated, fertilized, and tilled weekly to promote degradation of the wood-preserving constituents. Turkey and chicken manure was applied to promote microbial growth.

Soils impacted by CCA with a concentration of 5 parts per million (ppm) arsenic or greater, as determined by EP toxicity testing, were excavated and disposed off-site at the former GSX hazardous waste landfill (now Safety Kleen) in Pinewood, South Carolina (Ref. 11). It is estimated that 98 cubic yards of impacted soil was transported off-site (Ref. 9, pg. 6; Ref. 17). Unused creosote oil, creosote sludge, and bottom sludge from various oil tanks was containerized and transported to the hazardous waste landfill or burned for thermal recovery at an off-site location (Ref. 15, pg. 3).

Soils containing less than 5.0 ppm arsenic were stabilized to less than 0.5 ppm arsenic by mixing the impacted soils with Portland cement (Ref. 12, p. 3). The mixture was buried in place. An estimated total of 93 cubic yards of impacted soil was stabilized and buried on site (Ref. 4, pg. 6; Ref. 17). Presented in Reference 17 of this report is the grid system used to determine the areas for CCA soil removal and encapsulation at the site.

All hazardous waste that was transported off-site was managed and disposed of properly in accordance with hazardous waste management regulations. A summary of hazardous waste management data, since 1981 is presented in Attachment B. The hazardous waste management summary includes the date the waste was generated, manifest number, waste number, EPA identification number, disposal location, transporter, and the amount of waste shipped.

The areas of the site that were not excavated or treated in place were tilled on multiple occasions to encourage biological degradation (Ref. 12).

2.4 Ultimate Disposition of Waste

Surface soils impacted with creosote and PCP were excavated and landfarmed on-site. CCA impacted soils were either excavated and transported to a hazardous waste landfill or stabilized with Portland cement and buried in place, depending upon the concentration of arsenic. Unused creosote oil and sludge from various oil tanks was transported to a hazardous waste landfill or burned at an off-site location for thermal recovery.

2.5 Description of Past and Current RCRA Status

The Wilmington, North Carolina facility has never been classified as a Resource Conservation and Recovery Act (RCRA) site. The North Carolina Solid and Hazardous Waste Branch was authorized to implement a state program in lieu of the federal hazardous waste program under RCRA. Southern Wood Piedmont signed an administrative order on consent on May 20, 1985 with North Carolina indicating that site remedial action would proceed under the State program.

The facility became inactive in 1983. For a short time after closure, RCRA waste codes (K001) were used to dispose of waste generated at the site. The K001 designation is specifically for bottom sediment sludge from the treatment of wastewater from wood preserving processes that use either creosote or PCP (Ref. 13 and Ref. 14). Designation of residual creosote constituents as K001 in previous documentation was inaccurate. A more accurate designation for the excavated soils may be one or all of the following: F032 (process residuals from operations which used chlorophenolic formulations [PCP]), F034 (process residuals from creosote operations), or F035 (process residuals from operations which used CCA). The SWP site is presently listed as a conditionally exempt small quantity generator (less than 220 pounds of hazardous waste per month) regulated under RCRA. The site listing rolls in and out of small quantity generator and large quantity generator status depending on remedial activities being performed. The site is also listed on the Federal CERCLA program's database.

2.6 Location and Condition of Vessels Previously Used to Store Hazardous Substances

The location of the aboveground storage tanks is best derived from the January 1982 Southern Wood Piedmont Site plat prepared for the City of Wilmington (Figure 3), the January 1982 Atlantic Coast terminal plat (Figure 4), and from historical aerial photographs and Sanborn maps presented in Section 10.0 and Attachment H of this report. The physical condition of the aboveground storage tanks prior to decommissioning is not documented. Following removal of all hazardous materials, all of the storage tanks at the site were dismantled for scrap during site closure.

Based on the 1982 plats, there were four 15-feet diameter and three 7-feet diameter work tanks located in the creosote and PCP treatment area. Three 20-feet diameter and one 15-feet diameter storage tanks were located in the CCA treatment area. Four large storage tanks containing creosote were located along the western property boundary near the southern slip. Creosote from ocean liners was transferred into the large storage tanks. Two of the tanks were 35 feet in diameter, one tank was 50 feet in diameter, and one tank was 55 feet in diameter. The height of the tanks is not known.

There was a number of above ground storage tanks on-site that contained non-hazardous substances. Two diesel storage tanks were located in the western portion of the site, just north of the large storage tanks. The tanks were approximately 4 feet wide by 7 feet long. The diesel tank located on the Atlantic Coast Terminal property was approximately 30 feet in diameter. Diesel fuel was used to fuel trains, for heating, and as a carrier agent for pentachlorophenol. Five propane storage tanks were located near the eastern property boundary. The tanks were oblong and approximately 15 feet in length.

2.7 Summary of All On-Site Hazardous Substance Releases

A catastrophic release of hazardous substances into the environment has never occurred at the Wilmington, North Carolina facility. Hazardous substances were intermittently released into the environment during routine daily operations that occurred while the facility was actively treating lumber from 1932 through 1983. The following table summarizes potential source area locations

identified by NCDEHNR, the estimated amount of impacted soil, and contaminant type (Ref. 4, p. 9-10, Figure 2; Ref. 18).

AREA	AMOUNT	CONTAMINANT
Track and Treating Area	13,861 cubic yards	SVOCs, (PAH)
Large Storage Tank Area	800 cubic yards	SVOCs, (PAH)
Creosote Ditch Area	3,215 cubic yards	SVOCs, (PAH)
Landfarm Areas 1 & 2	5 acres	SVOCs, (PAH)
Areas NTA[1] & NTB	17,208 cubic yards	(PAH, Arsenic (NTA))
Area TWS[2]	15,000 cubic yards	(PAH, Arsenic)
Chromated Copper Arsenate	191 cubic yards	(Metals - Arsenic)

Note: [1]NTA & NTB = non-treated wood storage areas A and B
[2]TWS = treated wood storage area.

Please refer to the memorandum by Stuart F. Parker for the methods used to determine the amounts of impacted soils (Ref. 18).

3.0 USGS TOPOGRAPHIC MAP

Please refer to Figure 1 for the 1979 Photorevised USGS 7.5-Minute Quadrangle of Wilmington, NC (Ref. 1). A one-mile radius from the site is indicated on the topographic map. An original USGS topographic map is located in Attachment C.

4.0 SURVEY PLAT

Please refer to Figure 3 for the January 1982 Plat 1-5-53B of the City of Wilmington property leased to SWP prior to decommissioning of the facility. This plat was prepared and certified by a North Carolina Registered Land Surveyor. The 1982 plat shows scale, benchmarks, north arrow, property boundaries, buildings, structures, perennial and non-perennial surface water features, drainage ditches, known or suspected spill disposal areas, overhead utilities, storage vessels, and identification of all adjacent property owners. A new plat was not prepared when the NCSPA purchased the COW property in June 1998.

A 1982 field check was completed on a 1959 plat for the NCSPA property (Figure 4). This plat and the field check were conducted by a North Carolina Registered Land Surveyor. The plat shows scale, benchmarks, north arrow, property boundaries, buildings, structures, perennial and non-perennial surface water features, drainage ditches, known or suspected spill disposal areas, underground utilities, storage vessels, and identification of all adjacent property owners.

In 1993 Photogrammetric Services, Inc. (PSI) prepared aerial photographs of the site. Using photogrammetric methods and surveyed ground control, PSI prepared a site topographic map (Figure 6). The topographic map shows scale, benchmarks, north arrow, buildings, structures,

perennial and non-perennial surface water features, drainage ditches, dense vegetation, known or suspected disposal areas, storage vessels, and adjacent property use. ViroGroup, Inc., a North Carolina Registered Land Surveyor, obtained the photogrammetric services and the ground control points.

The groundwater monitoring wells existing prior to 1994 were surveyed by ViroGroup, Inc., a North Carolina Registered Land Surveyor. Wells installed after 1994 were surveyed by Black & Veatch Special Projects Corporation or a subcontractor to BVSPC during the expanded site inspection (ESI). The surveyor and certification information was not included with the ESI report. The well coordinates provided by ViroGroup, Inc. and listed in the ESI report were used to prepare a site map depicting the well locations (Figure 7). Please refer to Attachment D for a well database table listing well identification, date installed, depths, elevations, and coordinates.

5.0 HYDROGEOLOGIC CONDITIONS

5.1 Climatic Conditions

Hot, humid summers and mild winters with occasional cold spells (Ref. 19, pg. 1) characterize the climate of New Hanover County. The average daily temperature is 45.6° Fahrenheit in January and 80.1° F in July (Ref. 20 and Ref. 21). Mean annual precipitation is approximately 54 inches in the Wilmington area. The mean lake evaporation is approximately 42 inches, resulting in a net annual precipitation of 12 inches. The 2-year, 24-hour rainfall is approximately 5 inches (Ref. 7).

5.2 Regional Geology

The Wilmington, New Hanover County, North Carolina facility lies in the Coastal Plain Physiographic Province of southeastern North Carolina which extends from the Fall Line to the continental margin (Ref. 23, p. 3). Topography of the region consists of low-lying swamps and marshlands in the east grading to rolling uplands of the west. New Hanover County is a relatively flat, sandy plain.

Unconsolidated, post-Cretaceous coastal plain sediments, averaging from 5 to 60 feet thick, overlie Cretaceous sediments (Ref. 24). Cretaceous sedimentary bedrock formations form a seaward thickening wedge consisting of sands, clays, and limestones that measure 1,100 feet thick in Wilmington (Ref. 23, p. 8). Three geologic formations generally make up the Cretaceous sedimentary deposits present beneath the post-Cretaceous sediments throughout New Hanover County (Ref. 25). These formations in increasing age are the Castle Hayne Limestone, the PeeDee Formation, and the Black Creek Formation (Ref. 15, p. 16-18; Ref. 23, p. 8; Ref. 26). Underlying the Black Creek Formation is pre-Mesozoic crystalline basement rock.

The Castle Hayne Limestone is middle to late Eocene and typically consists of shell, marl, sand, and limestone. Beds of clay and sandy clay are present in the upper portion of the formation. Regionally, the unit may be as thick as 150 feet and lies unconformably over the PeeDee Formation. The Castle Hayne Limestone is absent locally in the area of the site (Ref. 23, p. 13, 20, 25, Figure 8, Figure 9).

The Late Cretaceous PeeDee Formation consists of glauconitic greenish-gray to dark gray silt, olive green to gray sand, and massive black clay interbedded with impure limestones and sandstones. The unit can be up to 700 feet thick and rests conformably over the Black Creek Formation (Ref. 23, p. 9, Figure 8).

The Black Creek Formation is composed of thinly laminated gray to black clay interbedded with gray to tan sands. Clay content increases in the upper portions of the unit. The Black Creek Formation may be up to 380 feet thick and overlies pre-Mesozoic crystalline basement rock (Ref. 23, p. 9, 20, 30, Figure 8).

5.3 Site Specific Geology

The 1977 Soil Survey of New Hanover County, North Carolina characterizes the site soil as urban land (Ref. 19, p. 3, 6, 7, 8, 11, 24, 25, 26, 29). The urban soil in the vicinity of the site is the Kureb-Baymeade-Rimini (KBR) Association. The KBR Association is described as excessively drained and well-drained soils that have a sand and fine sand surface layer and a sand, fine sandy loam, and loamy fine sand subsoil or underlying layer on uplands. The soil along the drainage ditch and Greenfield Creek is Dorovan. Dorovan soils are very poorly drained soils that have a muck, loam, or sandy loam surface layer and a muck or sand underlying layer in areas that are flooded by streams or tides.

Boring log data indicate that post-Cretaceous, unconsolidated sediments are approximately 40 to 50 feet thick at the site (Ref. 2, p. 59; Ref. 15, p. 17). The post-Cretaceous unconsolidated sediments consist of two sandy layers that are separated by a layer of semi-permeable peat and clay (Figure 8). The upper sand consists of loose, brown, fine to medium sand with a trace of coarse sand and small pebbles. The upper sand extends to a depth of 7 to 16 feet below land surface. The upper sand is underlain by a layer that consists of very loose, dark brown to black clayey peat to peaty clay with varying amounts of wood and root fragments, ranging from 5 to 16 feet thick. The contact between the peat layer and lower sand is sharp. The lower sand consists of loose to very loose, light brown to brown, medium to coarse sand 11 to 18 feet thick.

A Late Cretaceous layer of firm, tight, olive-gray silty clay underlies the lower sand. The clay ranges from 2.5 to 4 feet thick and is continuous under the site and appears to pinch out under Greenfield Creek. A dense, light gray sandy limestone with alternating cemented shell molds and friable silt to large pebble sand laminae lies beneath the clay.

5.4 Regional Hydrogeology

Regionally, there are three primary aquifers present throughout most of New Hanover County. The aquifers are the Upper Sandy Aquifer System, the Limestone Aquifer, and the Lower Sandy Aquifer System (Ref. 2, pgs. 60-61).

The Upper Sandy Aquifer System is a water table aquifer located within the post-Cretaceous unconsolidated sands and has a saturated thickness of approximately 46 feet. Regionally, this unit rests upon a less permeable layer in the upper portion of the Castle Hayne Limestone (Ref.

23, p. 21, 24, 30, 33, Figure 7; Ref. 24, p. 221). The Upper Sandy Aquifer System is represented on site by the upper sand, peat, and lower sand sequence.

The Limestone Aquifer (Castle Hayne Aquifer) is composed of permeable limestone and sands. Hydraulic conductivity values range from 15 ft/day in sand to 200 ft/day in porous limestone (Ref. 2, p. 60). Although the Limestone Aquifer is likely not present in the area of the site, regionally it is a productive aquifer (Ref. 23, Figure 9).

The Lower Sandy Aquifer System is the most significant aquifer in New Hanover County (Ref. 2, p. 60-61; Ref. 23, p. 9, 24, 25, Figure 13). It is comprised of calcareous sand within the upper portion of the PeeDee Formation. The unit is approximately 35 feet thick and is overlain by a confining clay unit in the PeeDee Formation that is approximately 4 to 15 feet thick (Ref. 23, p. 24, Figure 8). The hydraulic conductivity of the confining clay was estimated to be on the order of 10^{-8} cm/sec (Ref. 4, p.10). The top of the Lower Sandy Aquifer System is approximately 46 feet below land surface and the average horizontal hydraulic conductivity is estimated to be 33 ft/day (Ref. 2, p. 61). The Lower Sandy Aquifer System at the site consists of the olive-gray clay and sandy shell mold limestone. The base of the Lower Sandy Aquifer has not been encountered at the site.

Other aquifers found within the PeeDee Formation contain brackish water and are not relevant to this investigation. Regionally, saltwater encroachment from the ocean and Cape Fear River affects water quality approximately 225 feet below land surface (Ref. 23, Figure 5).

5.5 Site Specific Hydrogeology

The site is underlain by two aquifer systems (Figure 8): 1) the Upper Sandy Aquifer system located between the land surface and approximately 46 feet below land surface, and 2) the Lower Sandy Aquifer system located from approximately 46 feet to 81 feet below land surface (Ref. 23, p. 24). The two aquifer systems are separated by a clay that acts as a confining unit between the two aquifer systems. This clay is approximately 4 to 15 feet thick, tight, dry and prevents flow between the two aquifer systems.

The Upper Sandy Aquifer system is composed of a water table (shallow) aquifer and a semi-confined (intermediate) aquifer. Both the shallow aquifer and the intermediate aquifer consist of permeable fine to coarse sand. A peat layer separates the shallow aquifer from the intermediate aquifer. This peat is water saturated demonstrating a hydraulic connection between the shallow aquifer and the intermediate aquifer in the Upper Sandy Aquifer System.

The Upper Sandy Aquifer System is tidally influenced. The tidal fluctuations cause changes in the groundwater flow direction and gradients in the shallow and intermediate aquifers. These changes are described in detail in the following section of this report.

Groundwater measured in the shallow aquifer on February 25, 1998 indicate that an elongate mound is present that extends from the northeast corner of the site near MW-27 to the south central portion of the site near MW-17, MW-15, and MW-25 (Figure 9). From the central mound groundwater flows to the northwest (0.0005 ft/ft) in the vicinity of the landfarm, to the

west (0.0023 ft/ft) along the Cape Fear River, to the south (0.0008 ft/ft) along Greenfield Creek, and to the east (0.0074 ft/ft) along the drainage ditch. Groundwater flow in the vicinity of Optimist Park is to the west (0.0021 ft/ft) toward the drainage ditch.

Law Environmental calculated a horizontal hydraulic gradient for the peat layer in 1985 of 0.0028 ft/ft (Ref. 27, p. 4).

The intermediate aquifer groundwater flow is similar to the shallow aquifer (Figure 10). A central groundwater mound is present that extends from the northeast to the southern portion of the site toward Greenfield Creek. From this mound groundwater flows to the northwest (approximately 0.0014 ft/ft), to the west (0.0002 ft/ft), to the south (0.0002 ft/ft), and to the southeast (0.0004 ft/ft). In the vicinity of Optimist Park groundwater flow is to the west (approximately 0.0005 ft/ft).

Groundwater flow in the deep aquifer (Figure 11) is to the west-southwest toward the Cape Fear River with a horizontal hydraulic gradient of 0.0016 ft/ft.

ViroGroup, Inc. completed multiple (15) slug tests in the Upper Sandy Aquifer in 1992 during the Phase II groundwater quality assessment (Ref. 28, p. 12-13). The horizontal hydraulic conductivity in the shallow aquifer ranged from 1.33 ft/day to 1.05 ft/day, which is typical for clean fine sands. ViroGroup, Inc. (Ref. 28, p. 13) determined the horizontal hydraulic conductivity for the peat to be 0.09 ft/day, typical of silty sediments. Law Environmental in 1985 calculated a hydraulic conductivity range for the peat of 0.08 ft/day to 0.003 ft/day (Ref. 27, p. 4). The horizontal hydraulic conductivity in the intermediate aquifer ranged from 7.37 ft/day to 18.71 ft/day, which is typical of clean medium sand (Ref. 28, p. 13). No aquifer tests have been performed in the deep aquifer, however, literature studies suggest that the typical hydraulic conductivity for the Lower Aquifer System is 33 ft/day (Ref. 2, p. 61).

The averaged hydraulic gradient for the shallow aquifer is 0.0026 ft/ft, for the peat is 0.0028 ft/ft, for the intermediate aquifer is 0.0005 ft/ft and for the deep aquifer is 0.0016 ft/ft. The averaged hydraulic conductivity for the shallow aquifer is 1.19 ft/day, for the peat layer is 0.06 ft/day, for the intermediate aquifer is 13.04 ft/day, and the deep aquifer is 33 ft/day. An effective porosity of 20 percent was assumed for the shallow aquifer, 10 percent for the peat, 25 percent for the intermediate aquifer, and 30 percent for the deep aquifer. Using Darcy's law, the average groundwater seepage velocity in the shallow aquifer is 5.65 ft/year, the peat is 0.61 ft/year, the intermediate aquifer 9.52 ft/year, and the deep aquifer is 64.24 ft/year.

Water level measurements collected on February 25, 1998 were used to calculate vertical hydraulic gradients between aquifers at the site (Attachment E). The vertical hydraulic gradient between the intermediate aquifer and the shallow aquifer is downward in the central portion of the site at MW-11 (0.0023 ft/ft), MW-11A (0.0012 ft/ft), MW-19 (0.0169 ft/ft), MW-24R (0.0176 ft/ft), MW-31 (0.0090 ft/ft), and MW-40 (0.0030 ft/ft) and near Optimist Park at MW-37 (0.0048 ft/ft). The vertical hydraulic gradient is upward between the intermediate aquifer and the shallow aquifer along the Cape Fear River, Greenfield Creek, and the drainage ditch. An upward vertical gradient is present at MW-8 (0.0217 ft/ft), MW-14 (0.0333 ft/ft), MW-20 (0.0235 ft/ft), MW-22 (0.0246 ft/ft), MW-28 (0.0272 ft/ft), MW-29 (0.0132 ft/ft), and MW-34 (0.0262 ft/ft).

The vertical hydraulic gradient between the deep aquifer and the intermediate aquifer is upward across the site. Upward vertical gradients are present at MW-32 (0.0295 ft/ft), MW-35 (0.0017 ft/ft), MW-38 (0.1266 ft/ft), and MW-41 (0.0195 ft/ft).

5.6 Tidal Effects

The Cape Fear River and uncontrolled tributaries in the vicinity of the site are tidally influenced (Ref. 29). Groundwater elevations in the shallow and intermediate aquifers fluctuate with the rising and falling water levels in the Cape Fear River. Review of the groundwater flow directions and horizontal and vertical gradients at the site demonstrate that the groundwater in the Upper Sandy Aquifer System is influenced by the tides in the Cape Fear River (Ref. 15, p. 19-22, Figures 6-13). Changes in groundwater gradients and flow direction during the tidal cycle tend to retard the movement of groundwater in the subsurface.

Changes in groundwater flow due to tidal fluctuations were evaluated by measuring groundwater elevations in 35 monitoring wells and 3 staff gauges during a full tidal cycle between November 16 and 19, 1993. The following discussion is best reviewed by referring to Figures 6 through 13 in the ViroGroup, Inc. Phase III Groundwater Assessment Report (Ref. 15) for low tide, one-quarter low tide, three-quarter high tide, and high tide for the shallow and intermediate aquifers.

The low tide shallow aquifer map shows a central elongate water table mound with its highest elevation in the northeast corner of the site. From this elongate groundwater mound, the groundwater flows off in all directions toward on-site drainage ditches, Greenfield Creek, and the Cape Fear River. The groundwater in the central portion of the site is at its highest elevation during low tide in the Cape Fear River. This is likely the result of a delayed propagation of the increased heads from high tide along the Cape Fear River migrating to the central portion of the site.

At one-quarter low tide in the shallow aquifer, groundwater elevations increase adjacent to the Cape Fear River and the drainage ditches. A groundwater inflection line develops along the drainage ditch. This inflection line occurs when the surface water elevation is greater than the groundwater elevation in the adjacent aquifer. At this tidal stage, surface water flows into the shallow aquifer and encounters groundwater flowing from the central groundwater mound. These two opposing flows encounter each other and an inflection of approximately 90 degrees in flow direction occurs. An order of magnitude decrease in the hydraulic gradient occurs at the inflection line.

At three-quarter high tide in the shallow aquifer, the groundwater elevations continue to increase along the Cape Fear River, Greenfield Creek, and the drainage ditches. A groundwater inflection line develops along the Cape Fear River and Greenfield Creek to the southeast corner of the site.

Groundwater flow at high tide in the shallow aquifer is similar to three-quarter high tide. The groundwater inflection line along the Cape Fear River has moved further east into the site.

At low tide a central groundwater mound is also present in the intermediate aquifer. Groundwater along this mound flows toward the Cape Fear River, Greenfield Creek, and the drainage ditches. Vertical hydraulic gradients between the intermediate and shallow aquifers are downward along the Cape Fear River and the central portion of the site and upward along Greenfield Creek and the drainage ditches.

At one-quarter low tide in the intermediate aquifer groundwater elevations increase along the Cape Fear River. Radial groundwater flow disappears and becomes southeast across the site. The vertical hydraulic gradient becomes upward along the Cape Fear River. The vertical hydraulic gradient remains downward in the central portion of the site and upward along Greenfield Creek and the drainage ditches.

During three-quarter high tide in the intermediate aquifer groundwater elevations along the Cape Fear River continue to increase. Vertical hydraulic gradients remain similar to one-quarter low tide.

The groundwater flow at high tide is similar to three-quarter high tide in the intermediate aquifer. Groundwater elevations increase along the Cape Fear River and the central portion of the site. Upward vertical hydraulic gradients are present along the Cape Fear River and the drainage ditch. Downward vertical hydraulic gradients remain in the central portion of the site.

Groundwater measurements have not been collected from the deep aquifer in a manner that would allow for interpretation of groundwater flow changes during tidal cycles at the site.

5.7 Ambient Water Quality

Because the site is located adjacent to the brackish Cape Fear River, the shallow aquifer contains saline groundwater. Saline groundwater is Class GSA groundwater (Ref. 30, p.19). The Cape Fear River is classified as Class SC tidal saltwater (Ref. 31 and Ref. 32). Greenfield Creek and the on-site tributaries are classified as Class SC-Swamp (salt water).

To confirm the presence of saline water on site, groundwater samples were collected in May 1996 for chloride in the shallow and intermediate aquifers. A chloride isoconcentration map for the shallow aquifer (Figure 12) shows saline water along the Cape Fear River, Greenfield Creek, and the on-site drainage ditches. A small mound of fresh water (Class GA - chloride less than 250 mg/l; Ref. 30) is present in the northern and central portion of the site.

Chloride concentrations in the intermediate aquifer indicate fresh water is present.

The chloride concentration has not been measured in the deep aquifer. Literature studies suggest that the groundwater is fresh to a depth of 225 ft below land surface (Ref. 23, Figure 5). Below this depth salt water intrusion has occurred.

5.8 Hydrologic Setting

Based upon topography (Figure 6) runoff from most of the site is expected to flow in a south-southeast direction toward the wetlands and the drainage ditch on the eastern edge of the site. The upper end of the main drainage ditch is one of multiple probable points of entry (PPE) to the surface water pathway, but it is the primary one, draining most of the site (Ref. 4, p. 18, 19). This drainage ditch drains to the Cape Fear River via Greenfield Creek. Greenfield Creek flows in a westerly direction from Greenfield Lake, then along the southern border of the site to the Cape Fear River.

Runoff from the jetty area and from most of the western edge of the site is expected to flow directly to the Cape Fear River via a second PPE at the southern slip. A third, minor PPE exists where an intermittent ditch along the site's northern border drains to the Cape Fear River.

The surface water pathway continues approximately 15 miles upstream and downstream along the Cape Fear River due to tidal influences from the Atlantic Ocean (Ref. 33, p. 23, Figure 2.3). The surface water pathway also includes any tributaries of the Cape Fear River within 15 miles upstream and downstream from the site which are influenced by the tide (Ref. 34). The average annual flow rate for the Cape Fear River between 1982 and 1992 was 5,247 cubic feet per second (Ref. 36). The site is located in the 100-year floodplain (Ref. 35).

The site lies directly north and upgradient of a mapped wetland area (Attachment F) which fronts the main drainage ditch and Greenfield Creek (Ref. 4, p. 21). This wetland frontage totals approximately 0.45 miles and consists of approximately 10 acres of wetlands on the southeastern portion of the site (Ref. 37). Due to low topographic relief and tidal influence, wetlands are widespread in the area around the site. Within intervals subject to tidal reversal, a total of approximately 170 miles of wetland frontage are mapped within 15 miles upstream and downstream of the site (Ref. 38).

5.9 Greenfield Creek Tidal Gate

Uncontrolled, the drainage ditch and Greenfield Creek are tidally influenced. A tidal gate was constructed at the mouth of Greenfield Creek in the 1930's by the City of Wilmington to control stormwater runoff (Ref. 39, Part II, p. 4-2). The City of Wilmington repaired the tidal gate in the 1950's and again in 1980. The tidal gate was not maintained and was not functioning properly during the 1980's and early 1990's following closure of the site. A new tidal gate was installed in 1993 and is maintained by the NCSPA. This new tidal gate functions properly and prevents incoming tidal water from entering Greenfield Creek and the drainage ditch. The tidal gate opens during the outgoing tide, when the Cape Fear River flow is toward the Atlantic Ocean, allowing Greenfield Creek to discharge into the Cape Fear River. The tidal gate closes during the incoming tide, when the Cape Fear River flow is from the Atlantic Ocean, damming up Greenfield Creek and the drainage ditch. When the tidal gate is closed, water levels in Greenfield Creek and the drainage ditch increase due to damming by the closed tidal gate and from increases in groundwater elevations associated with high tide in the Cape Fear River.

When the tidal gate was not functioning properly during the 1980's the creek and drainage ditch contained saline water and allowed exchange of sediments and biological taxa between the Cape Fear River and Greenfield Creek. Since the time the new tidal gate was installed, the creek and drainage ditch contain fresh water and the exchange of sediment and biological taxa are limited (Ref. 39, Part II, p. 4-2).

6.0 INVENTORY AND MAP OF ALL WELLS, SPRINGS, AND SURFACE WATER INTAKES USED AS POTABLE WATER SOURCES

6.1 Groundwater Supply Sources

Groundwater is not used as a municipal water supply in Wilmington (Ref. 40). There are no groundwater users within a 2-mile radius of the site (Ref. 2, p. 62). The majority of the residents within 4 miles of the site are supplied water by the City of Wilmington Water Department or the Leland Sanitary District. One community well, supplying approximately 622 residents, is located 3.8 miles northeast (upgradient) of the site (Ref. 41 and Ref 42). The community well penetrates the Castle Hayne Limestone Aquifer. A map of potable water sources is presented in Figure 1 of the SIP (Ref. 4).

Approximately 437 individuals are estimated to obtain drinking water from private wells within 4 miles of the site (Ref. 40, Ref. 41, and Ref. 43). All of the private wells are located to the north across Smith Creek, upgradient of the site and are believed to penetrate the Castle Hayne Limestone Aquifer or the Pee Dee Lower Sandy Aquifer (Ref. 4, p. 13). Of the 1,059 individuals that utilize groundwater as a water supply, 24 are located between 2 and 3 miles of the site and 1,035 are located more than 3 miles from the site (Ref. 2, p. 62).

The nearest groundwater supply to the site is a flowing artesian well that supplies an outdoor faucet in Greenfield Park, approximately 0.25 miles southeast of the site (Ref. 4, p. 13). This well is classified as a noncommunity, transient supply (Ref. 40).

No wellhead protection areas exist within a 4-mile radius (Ref. 44).

6.2 Surface Water Supply Sources

The City of Wilmington Water Department and the Leland Sanitary District municipal systems are supplied by surface water intakes located 23 miles upstream of the site on the Cape Fear River (Ref. 2, p. 61, Ref. 40, Ref. 43). No primary or standby surface water intakes currently operate within 15 miles upstream or downstream of the site (Ref. 4, p. 21).

7.0 IDENTIFICATION OF ENVIRONMENTALLY SENSITIVE AREAS ON AND ADJACENT TO THE SITE

Environmentally sensitive areas were evaluated thoroughly during both the 1995 Site Inspection Prioritization (Ref. 4, p. 21-23) and the 1997 Expanded Site Inspection (Ref. 2, p. 94). Below is a list summarizing designated environmentally sensitive areas in a 4-mile radius of the

Wilmington, North Carolina site and within the Cape Fear River basin up to 15 miles downstream of the site (Ref. 45, Ref. 46, and Ref. 47):

Environmentally Sensitive Areas	Present
Marine Sanctuaries	No
National and State Parks	No
Designated and Proposed Federal and State Wilderness and Natural Areas	Yes
Areas identified under the Coastal Zone Management Act	No
Sensitive areas under the National Estuary Program or Near Coastal Waters Program	No
Critical areas under the Clean Lakes Program	No
National Monuments	No
National and State Historical Sites	No
National and State Seashore, Lakeshore, and River Recreational Areas	Yes
Critical Habitats and Habitats for State or Federal Designated or Proposed Endangered or Threatened Species or species under review as to their endangered or threatened status	Yes
National and State Preserves and Forests	No
National and State Wildlife Refuges	No
Coastal Barriers and Units of a Coastal Barrier Resources System	No
Federal land designated for protection of a natural ecosystem	No
Spawning areas critical for the maintenance of fish/shellfish species within river, lake or coastal tidal waters	No
Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters	No
Terrestrial areas utilized for breeding by large or dense aggregations of animals	No
Rivers State or Federally designated Scenic or Wild	No
State lands designated for wildlife or game management	No
Areas important to maintenance of unique biotic communities	Yes
State designated areas for the protection or maintenance of aquatic life	No
Wetlands	Yes

The following is a description of each of the above environmentally sensitive areas identified as being present on or adjacent to the Wilmington, North Carolina site.

Designated and Proposed Federal and State Wilderness and Natural Areas - The North Carolina Heritage Program identified the Brunswick River-Cape Fear Marsh located northwest of the site as a natural area. This area is significant for its extensive tidal marsh and for the habitat it provides for fish and other species. The Brunswick River-Cape Fear Marsh area is located approximately 0.6 miles west of the site. The Cape Fear River separates the site from this area.

The Lower Cape Fear River Bird Nesting Islands (dredge spoil islands) located west of Carolina and Kure Beaches have been designated a natural area. These islands provide nesting for colonial water birds.

Recreational Areas - The Cape Fear River is used for commercial fishing as well as recreational fishing and boating (Ref. 48 and Ref. 49). There are seven commercial fisheries located along the Cape Fear River between Eagle Island and the Atlantic Ocean (Ref. 49). Species that are of significant value include the fluke flounder, clams, shrimp, and blue crabs. There is evidence of recreational fishing along the banks of Greenfield Creek and on the Cape Fear River along the southern site boundary (Ref. 2, p. 94).

Aquatic Habitat - The Lower Cape Fear River northwest, west, and southwest of Wilmington has been designated as a Priority Aquatic Habitat. Brackish water, containing numerous rare animals, runs from north of Wilmington to south of Smith Island for approximately 20-25 miles.

Threatened and/or Endangered Animal Species - The North Carolina Natural Heritage Program identified several rare animal species within a 4-mile radius of the site. Rare animals include the Federally Endangered Shortnose Sturgeon (*Acipenser brevirostrum*) and Manatee (*Trichechus manatus*). The manatee inhabits the Cape Fear River estuary in the summer months. Federally threatened alligators (*Alligator mississippiensis*) are present in the tributary system of the Cape Fear River. The marshes are the only places known in North Carolina to have populations of the scarce Federal Species of Concern Rare Skipper butterfly (*Problema bulenta*). State significantly rare marine and estuarine fishes of the river are Freckled Blenny (*Hypsobellius ionthas*), Spinycheek Sleeper (*Eleotris pisonis*), Oppossum pipefish (*Microphis brachyurus*) and Marked Goby (*Gobionellus stigmaticus*). The state special concern species least killfish (*Heterandria formosa*); the state endangered barrel floater (*Anodonta couperiana*); the state endangered magnificent ramshorn (*Planorbella magnifica*); and the extirpated Greenfield ramshorn snail (*Helisoma eucosmium*) have been reported in the area.

Threatened Plant Species - The North Carolina Natural Heritage Program also identified numerous rare plant species, three of which are threatened. The Snowy Orchid (*Platanthera nivea*), Carolina Grasswort (*Lilaeopsis caroliniansis*), and Dwarf Bladderwort (*Utriculairia olivacea*) are designated threatened plant species found in the vicinity of the Cape Fear River basin. Candidate plants include Ribbed Bishopweed (*Ptilimnium costatum*) and Carolina Bishopweed (*Ptilimnium sp. 1*). Significantly rare plants include the Spoonflower (*Peltandra sagittifolia*).

Areas Important to Maintenance of Unique Biotic Communities - Marine fishery officials report that the Cape Fear River at Wilmington is a nursery for commercially harvested blue crab, eel, and shrimp (Ref. 50).

Wetlands - Approximately 170 miles of wetland frontage exists on the Cape Fear River System both upstream and downstream of the site along the 15-mile surface water migration pathway (Ref. 29, Ref. 38). The estimated wetland acreage on-site is 10 acres. There are approximately 130 acres of wetlands within 0.5 miles of the site and 3,840 acres within 4 miles of the site (Ref. 2, p. 111). Wetland delineation maps for the site are presented in Attachment F.

8.0 CURRENT OWNER'S DEED TO THE PROPERTY

The North Carolina State Ports Authority currently owns the site. Until recently, the site was divided into two parcels of land owned by the City of Wilmington and the NCSPA. The NCSPA purchased the former City of Wilmington property on June 18, 1998. Please refer to Attachment G for the current NCSPA deed to the property and the former COW and NCSPA deeds to the property. Southern Wood Piedmont Company leased the property from the COW and +/- 7 acres of the NCSPA property from 1964 to 1983. Various other site operators leased the property from the COW between 1920 and 1964.

9.0 OWNERSHIP CHRONOLOGY

9.1 Former City of Wilmington Parcel

A) Prior to 1920, the site was owned by the United States Shipping Board Emergency Fleet Corporation and leased to Newport Shipbuilding Company. This property was known as the Old Liberty Shipyard. A portion of the property may have been leased to E.R. Eubank Sawmill (Ref. 51 and Ref. 52).

B) 1920 - Deeded to the City of Wilmington
Lessee - Newport Shipbuilding Company

C) 1932 - Lessee - North State Creosoting Company

D) 1935 - Lessee - Taylor-Colquitt Company
Sub Lessee -- North State Creosoting Company (May 24, 1935 to May 21, 1940)

E) 1964 - Lessee - Taylor Piedmont (formerly Taylor-Colquitt)

F) 1969 - Lessee - ITT Corporation purchased Taylor Piedmont

G) 1971 - Lessee - Southern Wood Piedmont

H) 1983 - Southern Wood Piedmont closed the facility

I) 1998 - Deeded to NCSPA

9.2 North Carolina State Ports Authority Parcel

The NCSPA acquired the southern portion of the site on September 5, 1968 from Tenneco Oil Company. Tenneco Oil Company acquired the property from Atlantic Coast Terminals on December 27, 1961. Atlantic Coast Terminals acquired the property from Thomas H. Wright, Jr. and Eleanor Wright Beane and W.S.R. Beane on August 28, 1959. The chain-of-title for the NCSPA is shown in Attachment G. The southern parcel was never developed. The COW constructed a sanitary sewer pipe across the parcel that discharged raw sewage to the Cape Fear

River. Southern Wood Piedmont leased approximately 7 acres in the northwest portion of the property that was used for treated wood storage.

10.0 OPERATIONAL HISTORY, AERIAL PHOTOGRAPHS, AND SANBORN MAPS

Site operational history and land use history was obtained from SWP and NCDENR files and by obtaining City of Wilmington maps, Sanborn Fire Insurance maps, plats, USGS topographic maps and aerial photographs. City of Wilmington Maps were obtained for 1918 and 1954. Sanborn Fire Insurance Maps providing coverage of the subject property were obtained for the years 1910, 1921, an unknown date between 1921 and 1935, 1948, 1950, 1955, 1967, and 1973. Aerial photographs were reviewed for the years 1938, 1949, 1954, 1959, 1966, and 1977. Survey plats were obtained for the City of Wilmington property (1982) and the Atlantic Coast Terminal, Inc. property (1959; field checked 1982). Obtainable copies of historical maps and photographs are presented in Attachment H.

A 1910 Sanborn map was produced for the Wilmington area north of what is now the Amerada Hess property. Because the 1910 map did not include the site, suggests that the property may have been undeveloped. The map for the area north of the site indicated, going south to north, the Kidder Lumber Sawing & Planing Mill, Wilmington Cooperage Co., Standard Turpentine Chemical Works, and Spiritine Chemical Company.

A 1918 City of Wilmington map indicates the site to be vacant. North of the site along the Cape Fear River is Chadbourn Lumber Co., J.C. Selby Handle Factory, Wilmington Cooperage Co., Astptodyne Chemical Co., and Spiritine Chemical Co. Greenfield Creek is shown as a meandering creek.

In 1920, the City of Wilmington purchased the property. Prior to 1921, E.R. Eubank Sawmill may have occupied the property (Ref. 52).

The 1921 Sanborn map shows the property leased to Newport Shipbuilding Company. The site was used during World War I as a plant to construct barges and ships (Ref. 6). Chadborne & Bates Lumber Company was operating to the immediate north of Newport Shipbuilding Company.

A Sanborn map for some time between 1932 and 1935 indicates North State Treating Company operating a creosote treatment facility on the eastern portion of the property. In 1932, North State Creosoting Company leased the property and wood-treating operations commenced on-site using creosote. Three creosote tanks and a creosoting room are present. The City of Wilmington occupied a wood frame building in the central portion of the site. J. Herbert Bate Co. (planing mill) occupied the site formerly owned by the Chadbourn & Bates Lumber Co.

In 1935, Taylor-Colquitt purchased North State Creosoting Company. An aerial photograph dated April 4, 1938 portrays the wood treating operations on the south central portion of the site. Four large storage tanks are adjacent to the south slip on the Cape Fear River. Tracks cross the property on a regular spacing. Treated wood is stored on the western half and non-treated wood is stored on the eastern half of the site. The J. Herbert Bate Co. planing mill occupies the site to

the north. Greenfield Creek is shown as a meandering tributary. The drainage ditch appears as a wide low-lying area with no defined channel.

The 1948 Sanborn map indicates that Taylor Colquitt Creosoting Company expanded the wood-treating facility to include an additional creosote tank, dip tanks, and additional railroad spurs.

A 1949 aerial photograph indicates the site conditions similar to the 1938 aerial photograph. The creosote treatment area, large storage tanks, tracks, and wood storage are similar, except each area has become better defined. A 24-inch diameter sanitary sewer pipe has been installed by the COW across the southern end of the property near Greenfield Creek to discharge raw sewage to the Cape Fear River. The drainage ditch and Greenfield Creek have been channelized. It appears that channelization occurred at approximately the same time as construction of the sanitary sewer discharge pipe.

The 1950 Sanborn map shows Taylor Colquitt Creosoting Company and J. Herbert Bates Lumber Co., Inc. still in operation.

An April 5, 1954 aerial photograph indicates site conditions to be approximately the same as the 1949 aerial photograph, with a few minor improvements. A diesel tank is located just north of the large storage tanks. The on-site drainage ditch is better defined. The first baseball field in Optimist Park has been established.

The 1954 City of Wilmington map does not indicate site use.

The 1955 Sanborn map shows the property further developed by Taylor Colquit Creosoting Company. Two pole yards and train tracks are indicated on the property. On the southwestern portion of the property, adjacent to the southern slip, are four large aboveground creosote tanks. Just north of the creosote tanks, a sawmill is present. In the south-central portion of the property the following improvements are shown: boiler room, locomotive shop, waste bin, underground waste bin, auto repair building, machine shop acid tank, and retorts. Greenfield Street extends from east to west through the central portion of the property to a marine supply building. Two small sawdust collectors are indicated toward the center of the property. A pole peeling structure and dry kilns are located to the east of the sawdust collectors. A lab, wash room, and another office building are located on the eastern border of the property on both sides of Greenfield Street. ADZ Mill is shown in the southeastern corner of the property. Coastal Terminals of North Carolina (storage and shipping of petroleum products) is indicated on the property to the immediate north of the site.

A March 1956 aerial photograph confirms the layout as described on the 1955 Sanborn map.

An April 1959 aerial photograph indicates the site operations as described for the 1955 Sanborn map. Two diesel tanks are just north of the large storage tank area. The American Bitumuls Company occupies the property south of Greenfield Creek, which is now PacTank. A bulk chemical storage facility has been constructed immediately north of the site on what is now Amerada Hess. A second baseball field has been constructed in Optimist Park.

The 1959 Atlantic Coast Terminals, Inc. plat (southern half of the site; Figure 4) indicates that this parcel is 44.58 acres in area. A portion of the southwest corner (approximately 7 acres) is leased to Taylor Colquitt Company. The property located to the north is owned by COW and leased to Taylor Colquitt Company. The property to the east (now Optimist Park) is owned by COW on both sides of the railroad tracks. The railroad tracks are labeled Surry Street. E.F. McCartney, Heirs T.H. Wright, NCSPA, and American Bitumuls Company (now PakTank, Inc.) own the parcels south of Greenfield Creek. A 24-inch diameter sanitary sewer pipe cuts across the south central portion of the Atlantic Coast Terminals, Inc. property from the COW property to the east and discharges to the Cape Fear River near the mouth of Greenfield Creek. The properties located adjacent to the southeast corner of Atlantic Coast Terminals, Inc. have a jagged property boundary that mimics the former meandering centerline of Greenfield Creek. Greenfield Creek was channelized sometime prior to 1959. The western property boundary is the Cape Fear River. The southern boat slip is split by the Atlantic Coast Terminals property line.

A 1966 aerial photograph indicates site conditions to be as previously described. It appears that both the Hess facility and what is now PacTank have expanded operation and added additional large storage tanks.

The 1967 Sanborn map shows Taylor Piedmont in operation at the site with Hess Oil & Chemical Company and Citizens Oil Company to the north. The improvements indicated on the property are similar to those described for the 1955 Sanborn map with the addition of three small storage tanks west of the creosote day tanks and three saw mills just north of the large creosote storage tanks in the northwest portion of the property. An open conveyor connects the sawmills. A sawdust hopper is also located in this area. Two small sawdust collectors are indicated near the center of the site. The property to the north is Hess Oil and Chemical Company and Citizens Oil Company (storage and shipping petroleum products) and McMillan & Cameron (bulk- oil distribution plant).

The 1970 USGS 7.5-minute Wilmington Quadrangle topographic map (Attachment C) shows the site in a similar condition as previously described. This map was photorevised in 1979.

The 1973 Sanborn map shows the property in a similar condition as indicated on the 1967 Sanborn map.

A 1977 aerial photograph indicates site conditions as previously described. Both Hess and what is now PakTank have continued to expand operations. The PakTank area now contains at least six additional large storage tanks.

A 1982 survey plat of the COW (Figure 3) property indicates an area of 44.22 acres. Site topography is indicated on the plat. Shown on the plat is an office building, former lab building, kiln drying building, propane storage tanks, bark remover, cooker building, eight creosote work tanks, four CCA work tanks, saw mill, four large storage tanks, two diesel tanks, and several buildings used for various purposes. Concrete block retaining walls are present along the southern side of the large storage tanks and around the CCA work tanks. An eight-foot high berm is located along the western side of the large storage tanks. Tracks cross the property on a regular spacing in a northeast-southwest direction in the center and eastern portion of the

property. Tracks run in an east-west direction on the peninsula between slips along the Cape Fear River. A drainage ditch is present on the COW property near the northern boundary between the COW property and Hess Oil and Chemical Company. A grease trap is located near the eastern end and a wet well is located in the central portion of this drainage ditch. A second drainage ditch is located on the COW property near the eastern boundary. This drainage ditch runs east along the south side of Greenfield Street and turns south near the eastern property boundary. This drainage ditch is piped near the office building and under a berm located near the southeastern corner of the COW property. The 2-feet tall berm arcs along the southwest corner of the COW property and extends to the west onto the NCSPA property. This berm is located adjacent to the covered ditch. Lawing Arthur Hadine and Heir George W. Kidder own the parcels east of the COW property. The property in the vicinity of Optimist Park is not shown on the plat. The NCSPA owns the property south of the COW parcel (now owned by NCSPA). West of the COW property is the Cape Fear River. A walkway and dock are present in the Cape Fear River between the north and south slips.

11.0 HAZARDOUS SUBSTANCE LIST

Listed below is a table summarizing the hazardous substances used for wood preservation and the approximate dates each of the substances were used (Ref. 2, p. 6).

Hazardous Substance	Dates of Use and/or Storage
Creosote Oil	1932 through 1983
Chromated Copper Arsenate	1972 through 1983
Pentachlorophenol	1980 through 1983

Creosote was used to protect and preserve railroad ties and other timber products. Creosote is a yellow to brown color, has a tar odor, and contains polynuclear aromatic hydrocarbons (PAHs).

Chromated Copper Arsenate (CCA) was used to pressure treat lumber and has a characteristic greenish tint.

Pentachlorophenol was used to treat most wooded power poles. Diesel fuel was used as a carrier to apply the pentachlorophenol. Pentachlorophenol tends to break down in sunlight and may contain dioxins as a trace contaminant. Dioxins are not volatile and binds to soil/sediment.

12.0 SITE ENVIRONMENTAL PERMIT AND REGULATORY HISTORY

12.1 Permits

In 1976, a large area of culled and broken poles along the COW/NCSPA property line was removed. At this time, a permit to excavate and/or fill was obtained by SWP to close the surface drainage ditch on the NCSPA property (Ref. 53, Ref. 54, and Ref. 55). Permit number 28-76 (SAWKS 75-65-23-659) was issued to SWP for the following activities:

1) Construction of a backfilled bulkhead,
2) Construction of an earthened dike (along southern side of drainage ditch on NCSPA property, and
3) Filling of an existing ditch (covered ditch) and excavation of a drainage ditch behind the covered ditch.

On October 30, 1981, the State of North Carolina issued SWP a NPDES permit (NC0000761) to discharge non-contact cooling water to the Cape Fear River and to discharge storm water runoff into Greenfield Creek (Ref. 56). Permit conditions required SWP to monitor flow and maintain pH, temperature, phenol, oil/grease, and total chromium.

Permit 2652 for wastewater treatment was referenced in the non-contact cooling water permit as an existing permit. A copy of this permit could not be located.

On September 15, 1980 SWP was issued permit #2704R3 for the construction and/or operation of air pollution abatement facilities and/or emission sources (Ref. 57). The permit allowed operation of two wood fired boilers, one transfer cyclone on the chipper, the #5 and #11 debarkers, and one transfer cyclone on the boiler fuel storage room and for the discharge of the associated stack gases and treated air into the outdoor atmosphere.

12.2 Regulatory History

On June 5, 1981, Southern Wood Piedmont Company submitted an Initial Notification of Hazardous Waste Site as required by Section 103(c) of CERCLA (Ref. 58).

A RCRA interim status inspection was completed on November 19 and 25, 1981 that included a review of records and a site survey (Ref. 7). Regulatory requirements covered, included those contained in 40 CFR Part 262 Generator Standards and 40 CFR Part 265 under General Facilities Standards, tanks, containers, and storage facilities. No documentation is presented in the inspection that indicates the regulatory agency that completed the inspection.

Southern Wood Piedmont Company entered into an Administrative Order on Consent (AOC) with the State of North Carolina on May 20, 1985 (Ref. 9, Ref. 10, Ref. 13, and Ref. 14). A January 3, 1994 letter from SWP to NCDEHNR provided notice that SWP had fully completed all actions agreed to in the AOC by treating the soils to a level that is "Protective of Human Health and the Environment" (Ref. 12). On March 17, 1994 Doug Holyfield of NCDEHNR indicated that acceptable remediation levels are considerably lower for residential use than the residual levels reported by SWP (Ref. 59). NCDEHNR also indicated that if SWP in coordination with the COW and NCSPA can provide detailed information on the exact future use of the property, such as low intensity industrial, that alternate residual concentrations may be considered (Ref. 60). It was further indicated that with cover, whereby no exposures are possible, existing levels in the landfarm may be acceptable and that the acceptable residual levels will apply to the wood storage areas as well.

The NCDEHNR completed a Site Inspection Prioritization (SIP) in January 1995 (Ref. 4). Black & Veatch Special Projects Corporation completed an Expanded Site Inspection for the Region IV USEPA in 1997 (Ref. 2).

A Deferral Administrative Order on Consent was entered into by Southern Wood Piedmont and North Carolina Department of Environment and Natural Resources on May 24, 1999. The deferral agreement moved site remediation to the state lead North Carolina Responsible Party Voluntary Remedial Action program, instead of the USEPA lead CERCLA program. This RI report is the first requirement in the 1999 AOC.

13.0 SUMMARY OF ALL PREVIOUS AND ONGOING ENVIRONMENTAL INVESTIGATIONS AND REGULATORY INVOLVEMENT

Presented below is a chronological listing of previous investigations completed and involved parties:

DATE	INVESTIGATION	INVOLVED PARTIES
March 1982	Geotechnical Investigation	Soil & Material Engineers, COW
March 1982	Complaint or 24-Hour Leak Notice	COW
April 1982	Soil Sampling	NCDHR
June 1982	Superfund Report	NCDHR, Region IV EPA
July 1984	Preliminary Assessment	NCDHR, Region IV EPA
May 1985	Administrative Order on Consent	State of North Carolina, SWP
September 1985	Hydrogeologic Report	Law Environmental, SWP
April 1986	Site Screening Investigation	Halliburton NUS, Region IV EPA
February 1992	Phase I Groundwater Quality Assessment	ETE, Inc., SWP
December 1992	Phase II Groundwater Quality Assessment	ViroGroup, Inc., SWP
September 1993	Data Summary Report for the 1990 Landfarm Area Sampling	Geraghty & Miller, Inc., SWP
September 1993	Data Summary for the 1991 Landfarm Area Sampling and Comparison of 1990 and 1991 Soil and Groundwater Data	Geraghty & Miller, Inc., SWP
December 1993	Data Summary Report for the Treated and Non-Treated Wood Storage Areas	Geraghty & Miller, Inc., SWP
December 1993	Risk Assessment for Landfarm Areas	Geraghty & Miller, Inc., SWP
July 1994	Phase III Groundwater Quality Assessment	ViroGroup, Inc., SWP
January 1995	Site Inspection Prioritization	NCDEHNR
May 1996	Soil, Sediment, & Surface Water Assessment	ViroGroup, Inc., SWP
May 1996	Human Health & Ecological Risk Assessment	ChemRisk, SWP
July 1997	Expanded Site Inspection (ESI)	Black & Veatch, Region IV USEPA

Presented below are summaries for each previous investigation.

13.1 Geotechnical Investigation Report

Prior to facility closure, the COW contracted Soil & Material Engineers (S&ME) to perform a geotechnical investigation (1981) at the site (Ref. 61). The purpose of this investigation was to establish the suitability of site soils for possible development and to evaluate groundwater quality at various locations across the site. The investigation included the completion of five soil borings, installation of five monitoring wells, engineering evaluation, and assessment of groundwater quality. Wells CW-1 through CW-3 and CW-5 were screened in the shallow aquifer. Well CW-4 was screened in the intermediate aquifer. Monitoring well CW-2, located adjacent to the wood treating facility, contained elevated concentrations of phenols.

13.2 Compliant or 24-Hour Leak Report

Hugh Caldwell of the City of Wilmington reported a pollution incident to the North Carolina Department of Human Resources on March 15, 1982 (Ref. 61). This report immediately followed the geotechnical investigation completed by S&ME.

13.3 North Carolina Department of Human Resources

Surface and subsurface soil samples were collected by NCDHR on April 30, 1982 from two locations in the track area at the site (Ref. 63 and Ref. 64). Sample sets (surface and subsurface) were collected at 10 feet and 200 feet from the creosote/PCP treatment cylinder. The subsurface sample at each location was collected at a depth of 14-inches below ground surface. The analyses indicated that most of the contamination was found in the upper few inches of soil along the treating track drip area and at greater depths near the treating vessels. The collected samples were split with SWP.

13.4 Superfund Report

In June 1982, a Superfund waste disposal area deposit report was prepared regarding the site. The actual report could not be located, however, portions of the report are included in attachments to various correspondence (Ref. 9 and Ref. 12). The report identified the following four waste disposal deposits (Figure 5):

1. Area I, Covered Sludge Ditch - Creosote sludge from early plant operations were buried when the ditch was filled and covered.

2. Area II, Trash Dump Area - A general waste area containing mostly wood waste, dirt, and metal waste. This area was listed under Superfund because of the suspected presence of creosote material.

3. Area III, Dike Area - Solid creosote residuals (similar to road tar) were used to seal portions of the earthen dike near the southern boat slip.

4. Area IV, Trash Fill Area - A portion of the north slip was filled with mill waste that consisted of wood, metal bands, and a small amount of creosote sludge.

The report also identified six operating area deposits:

1. Track Area - Residuals dripped in this area in front of the creosote/PCP treatment cylinder.

2. Oil Treating Areas - Discolored soil around both oil treating buildings, working tanks, and the wastewater/oil recovery tank system.

3. Large Storage Tank Containment Area - Discolored soil.

4. Treated Product Storage Areas - Some soil discoloration.

5. CCA Storage Tank Area - Discolored soil.

6. Storage Tank Sludges - Sludge in the bottom of various treating tanks.

13.5 Preliminary Assessment

The North Carolina Department of Human Resources (NCDHR) completed a Preliminary Assessment (PA) of the site in July 1984 (Ref. 8). Representatives of NCDHR noted evidence of soil and groundwater contamination. Visible soil staining was observed in the main production areas in the south central portion of the site, around a cluster of creosote storage tanks to the west, and in the vicinity of the covered ditch. Oily sheens were noted on groundwater 1.5 feet beneath the ground surface and on surface water at several locations. Disposal of trash, tars, and creosote sludge was also reported in earth berms at the 2 slips on the Cape Fear River. No known samples were taken during the Preliminary Assessment. NCDHR recommended a medium priority for a site investigation. The site was referred to the EPA for a Field Investigation Team (FIT) Evaluation/Site Screening Investigation (SSI).

13.6 Administrative Order on Consent

Southern Wood Piedmont Company entered into an Administrative Order on Consent (AOC) with the State of North Carolina on May 20, 1985 (Ref. 9). The AOC addressed soil and groundwater contamination at the site and provided guidelines for remedial action with the purpose of minimizing the impact on the environment and public health in a manner consistent with the state and federal hazardous waste laws and rules. Under the provisions of the Consent Order, four areas were designated for excavation and on-site landfarming. These areas include: 1) the covered ditch, 2) the track area, 3) the oil treating area (main production area), and 4) the large storage tank containment area. Active remediation and landfarming per AOC guidelines took place from 1984 to 1990.

The AOC required the installation of lysimeters beneath the landfarm, three downgradient and one upgradient groundwater monitoring wells, and collection of routine surface water samples from the Cape Fear River. Treated pole storage areas were tilled in place. Guidelines for the disposal/treatment of CCA contaminated soils and storage tank sludge were also addressed. Soil contaminated with greater than 5.0 ppm arsenic by EP Toxicity testing was to be sent off-site to a permitted land disposal facility. While soil that contained between 5.0 ppm and 0.5 ppm arsenic was to be mixed with Portland cement in a ratio that does not allow arsenic to leach above 0.5 ppm. The treated material was then buried on site. CCA containing storage tank sludges were to

be removed for disposal in a hazardous waste landfill. Sludges from the bottom of various oil tanks were to be removed for disposal or energy recovery.

13.7 Landfarm Hydrogeologic Report

In September 1985, Law Environmental Services (LES) installed four 20-foot monitoring wells (MW-6 through MW-9) around the perimeter of the landfarm to monitor groundwater in the shallow aquifer (Ref. 27). LES determined the direction of groundwater flow to be west-northwest and southwest with a hydraulic gradient of 0.0028 ft/ft in the landfarm area. Horizontal conductivities ranged from 3×10^{-5} cm/sec in MW-6 to 1×10^{-6} cm/sec in MW-8. A groundwater flow velocity of 0.10 feet per year was calculated using Darcy's Law.

13.8 Site Screening Investigation - NUS

Halliburton Corporation (NUS) conducted a Site Screening Investigation (SSI) for the EPA on January 7, 1985 (Ref. 65). The investigation was conducted under the authority of the Comprehensive Environmental Response and Compensation Liability Act of 1980 (CERCLA). Sampling for this investigation included four of the five COW groundwater monitoring wells (MW-3 [CW-3] was not sampled) and one artesian well adjacent to Greenfield Lake, two surface water samples, and six soil/sediment samples. Composite surface soil samples were collected from the landfarm area (2) and on the jetty (1). In addition, NUS representatives collected one surface water and one sediment sample adjacent to the site in the Cape Fear River. A background surface water and sediment sample was obtained from the overflow stream below Greenfield Lake southeast of the site.

Monitoring well MW-2 (CW-2), located in the center of the site, contained concentrations of naphthalene, acenaphthalene, fluorene, and phenanthrene. Monitoring well MW-4 (CW-4), located in the northwestern portion of the site, contained acenaphthalene, fluorene, anthracene, fluoranthene, phenanthrene, and pyrene.

Pentachlorophenol (PCP) was detected in the landfarm soil. PCP was not detected in the groundwater.

Chromium was detected in the landfarm soil and in wells MW-2 (CW-2) and MW-5 (CW-5). Copper and arsenic were detected in soil samples from the jetty and the landfarm. Arsenic was detected in groundwater samples from MW-2 (CW-2) and MW-4 (CW-4).

The groundwater sample collected from the artesian well in Greenfield Park contained organic constituents that are not associated with creosote or other wood-preserving chemicals used at the site, nor where they found on the site.

The background sediment sample from below Greenfield Lake dam contained concentrations of isophorone, 2-chloronaphthalene, fluoranthene, pyrene, lead, and cyanide. The sediment sample in the Cape Fear River adjacent to the north slip contained isophorone, 2-methylnaphthalene, acenaphthalene, phenanthrene, anthracene, fluoranthene, benzo(j,k)fluorene, pyrene,

benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, lead, and cyanide.

Constituents related to creosote were detected in soil samples both on and off site. Fluoranthene and pyrene were detected in all of the soil samples collected during this investigation. Anthracene and phenanthrene were detected in all of the samples collected from the site. Chrysene was present in the landfarm area and in the sediment sample from the Cape Fear River. Fluorene, acenaphthene, naphthalene, and 2-methylnaphthalene were detected in the landfarm.

13.9 Phase I Groundwater Investigation

Beginning in February 1992, Environmental Technology Engineering, Inc. (ETE) conducted a Phase I groundwater investigation (Ref. 66). During the Phase I groundwater investigation, ETE installed 5 temporary wells (B-2 through B-6) and 8 permanent monitoring wells (MW-10 through MW-17). All of the monitoring wells, except MW-14, bracketed the water table. Monitoring well MW-14 was screened to bracket the contact between the base of the shallow aquifer and the peat.

Analytical results indicated that wood-preserving constituents had impacted the shallow aquifer. The greatest concentration of constituents occurred in monitoring wells B-4, MW-13, and MW-14. Free phase constituents were detected in MW-11 and MW-12.

Visible wood-preserving constituent soil staining was observed in B-4, MW-11, MW-12, MW-13, and MW-14. Diesel stained soils were observed in boreholes MW-15, MW-16, and MW-17.

Potentiometric maps indicated that groundwater flows from a central mound in all directions to the surrounding surface water bodies and drainage ditches.

13.10 Phase II Groundwater Investigation

The Phase II groundwater investigation (Ref. 28) completed by ViroGroup, Inc. (September through October 1992) included the abandonment of the five temporary wells (B-2 through B-6), installation of nine shallow aquifer wells (MW-18 through MW-26), and installation of three intermediate aquifer wells (MW-8A, MW-11A, and MW-19A). The Phase II groundwater investigation also included groundwater and soil sampling, aquifer testing, and preparation of a topographic map depicting the site.

Groundwater and surface water elevations were collected within a one-hour period at low tide. At low tide the groundwater from the shallow and intermediate aquifers discharged to the surrounding surface water bodies. From a central groundwater mound groundwater flow was to the east, south, and west at an average gradient of 0.0015 ft/ft.

Visual staining was observed in soil borings MW-19, MW-22, and MW-26. Dissolved arsenic was detected in monitoring wells MW-15, MW-17, and MW-22. The greatest concentration of wood-preserving constituents was detected in monitoring wells MW-13, MW-14, and MW-22. Detected constituents included acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene,

benzo(b)fluoranthene, carbazole, chrysene, 2,4-dimethylphenol, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, benzene, chloroform, ethylbenzene, xylenes, and toluene. Monitoring wells MW-11, MW-12, and MW-26 contained separate phase fluids.

In December 1992, ViroGroup collected sediment samples (SS-1 through SS-11; Figure 13 and Figure 19) from the drainage ditch and Greenfield Creek. Background concentrations of arsenic, chromium, copper, and lead were present both on and off site. The highest concentrations of wood-preserving constituents occurred in the drainage ditch near the wood-treating areas. The samples collected from Greenfield Creek had detectable levels of organics both upstream and downstream of the drainage ditch. Constituents detected included acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, carbazole, chrysene, dibenz(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, ethylbenzene, xylenes, and toluene.

13.11 Data Summary Report for the 1990 Landfarm Area Sampling

Geraghty & Miller, Inc. (G&M) submitted the Data Summary Report for the 1990 Landfarm Area Sampling to SWP in September 1993 (Ref. 16). The 1990 soil samples were collected to provide baseline data with which to conduct a risk assessment for the landfarm areas.

Prior to the soil sampling conducted by G&M in 1990, soil samples were routinely collected from the landfarm areas by SWP personnel (Table 10). For each sampling event, a composite soil sample was collected at each of the following depth intervals: 0 to 3 inches, 9 to 12 inches, 21 to 24 inches, and 6-inches below the base of the landfarm (substrate). Each composite sample consisted of four subsamples, a subsample from each quadrant of the landfarm area. The soil samples were analyzed for total nitrogen, total phosphorus, chloride, total organic carbon, pH, polynuclear aromatic hydrocarbons (PAHs), pentachlorophenol, phenol, and microbial counts.

Four to six month periods were evaluated for each landfarm area beginning June 1986. G&M concluded from the lab data that significant biodegradation of semi-volatile organic compounds had occurred in the landfarm between applications. Results, however, indicated that some constituents degraded at slower rates than other constituents. Most of the constituents degraded to non-detect levels after 2 to 4 months. Anthracene, phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, and chrysene persisted beyond 6 months. The most rapid degradation occurred during the warmest months of the year (Ref. 4, p. 5-7).

Two composite surficial soil samples were collected from the landfarm and analyzed for polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) and their respective chlorinated homologues and 2,3,7,8-congeners. The concentration for each class of PCDDs ranged from 0.14/0.17 (LF1/LF2) ug/kg dw (dry weight) total tetrachlorodibenzodioxins to 621/932 (LFI/LF2) ug/kg dw total octachlorodibenzodioxins. The concentration for each class of PCDFs ranged from 0.09/0.10 (LF1/LF2) ug/kg dw total tetrachlorodibenzofurans to 147/164 (LF1/LF2) ug/kg dw total heptachlorodibenzofurans. 2,3,7,8-Tetrachlorodibenzodioxin was detected at 0.004 ug/kg dw at LF1 and 0.008 ug/kg dw at LF2.

Groundwater samples were collected from monitoring wells MW-6, MW-7, MW-8, and MW-9 on October 9, 1990. No wood-preserving constituents were detected in the monitoring wells surrounding the landfarm.

13.12 1991 Landfarm Sampling and Comparison of 1990 and 1991 Soil and Groundwater Data

Geraghty & Miller, Inc. submitted the Data Summary for the 1991 Landfarm Area Sampling and Comparison of 1990 and 1991 Soil and Groundwater Data report in September 1993 (Ref. 68). In October 1991, soil and groundwater sampling was conducted at the same locations as the 1990 soil and groundwater sampling. The sampling depths were modified to include only the upper and lower layers of the landfarm. The landfarm material center and underlying substrate were not sampled because the 1990 sampling event indicated that the PAH concentrations in the landfarm were consistent with depth and significantly lower in the underlying substrate. The samples were analyzed for PAHs, CCA, and nutrients and compared to the October 1990 sampling results to assess the effectiveness of landfarming activities.

PAHs, phenolics, arsenic, chromium, and copper were detected in both sampling events. Maximum PAHs detected were anthracene (900 mg/kg), fluoranthene (520 mg/kg), and pyrene (980 mg/kg). Pentachlorophenol, arsenic, chromium, and copper were detected at maximum concentrations of 150 mg/kg, 84 mg/kg, 100 mg/kg, and 150 mg/kg, respectively. Benzo(a)pyrene and pentachlorophenol concentrations exceeded benchmark soil screening concentrations (Ref. 4).

Geraghty & Miller, Inc. concluded that the mean PAH concentration decreased in the landfarm from 1990 to 1991, especially those PAH constituents with two- and three-ring chemical structures. Two- and three-ring PAHs decreased from 9 to 88 percent. The average decrease was about 33 percent. Concentrations of four-, five-, and six-ring PAHs had a net increase of 4.5 percent. Literature studies indicate that the more complex PAHs (higher ring structure) are more difficult to degrade but are less mobile in the environment. G&M calculated that over a 30-year period constituents with a two- or three-ring chemical structure will degrade to less than 0.001 mg/kg and constituents with four- and five-ring chemical structures will degrade to 2 mg/kg or less.

For risk assessment purposes, the PAHs were divided into carcinogenic (cPAHs) and total PAHs (tPAHs). cPAH data was further reduced to a benzo(a)pyrene toxicity equivalency factor (TEF). The benzo(a)pyrene TEF ranged between 1.78 mg/kg and 72.64 mg/kg. tPAH concentration is the sum of all PAH constituents. The mean tPAH concentration was 531 mg/kg in the lower zone and 385 mg/kg in the upper zone of the landfarmed material. Statistical comparisons of the data in the lower and upper zones did not indicate a significant difference.

Groundwater samples were collected from monitoring wells MW-6, MW-7, MW-8, and MW-9 on October 14 and 15, 1991. No wood-preserving constituents were detected in the monitoring wells surrounding the landfarm areas.

13.13 Data Summary for the Treated and Non-Treated Wood Storage Areas

In December 1993, Geraghty & Miller, Inc. submitted the report titled Data Summary for the Treated and Non-Treated Wood Storage Areas Soil Investigations (Ref. 69). The purpose of the report was to determine if the soil in the treated wood storage area A (TWSA) and non-treated wood storage areas A (NTA) and B (NTB) had been impacted by wood-treating constituents. Soil in these areas was not excavated for landfarming. A 100-foot centered grid was laid out over the wood storage areas. Ninety-two hand auger borings were completed. Surface and subsurface soil samples (48) were randomly collected from one third (35) of the grid points at depths of 0- to 6-inches (Figure 14 and 17) and 12- to 18-inches below land surface (Figure 15 and 18). The remaining grid points were hand augured and visually described. Visual staining was observed on the soil surface in TWSA but not in the NTA or NTB areas.

The soil samples were analyzed for organic and inorganic wood-preserving constituents. Semi-volatile constituents naphthalene, acenaphthene, acenaphthylene, phenanthrene, anthracene, benzo(a)anthracene, chrysene, benzo(a)pyrene, benzo(b,k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, fluoranthene, carbazole, and trichlorophenol were detected in the soil samples. TWSA samples generally had the highest concentration of wood-preserving constituents. In 10 of 13 TWSA borings, concentrations decreased with depth. Maximum concentrations of arsenic, chromium, and copper were 63 mg/kg dw, 29 mg/kg dw, and 300 mg/kg dw, respectively. These maximum concentrations are within observed ranges for these elements in soils of the eastern United States (Ref. 70).

13.14 Risk Assessment for Landfarmed Areas

Geraghty & Miller, Inc. completed a human health and ecological risk assessment for the landfarm area (Ref. 67) in December 1993. The purpose of the assessment was to determine the risk that the impacted soils may pose to the use of the site for industrial activities and to evaluate if the conditions of the 1985 Administrative Order on Consent have been met. It was assumed that the landfarm area would be used for industrial purposes and that the landfarm would be covered with fill. Therefore, the only exposure to the impacted soils would be site construction workers during the development phase. The risk assessment evaluated the potential exposure through ingestion, dermal contact, and inhalation of dust. An exposure period of 13 weeks was determined to be a reasonable maximum time period for grading, filling, and paving the site. The potential exposure was calculated for a construction worker working 13 weeks, 6 days per week for 8 hours per day. Constituents included in the risk assessment were PAHs, phenol, dimethylphenol, trichlorophenol, tetrachlorophenol, pentachlorophenol, arsenic, copper, and chromium. The risk assessment was based on the analytical results of 72 samples collected by G&M, Inc. in 1990 and 1991.

To determine if the terms and conditions of the Administrative Order on Consent had been met, risk estimates for the construction worker were compared to the USEPA target risk criteria. The USEPAs range for target lifetime excess cancer risk (LECR) is 1×10^{-4} to 1×10^{-6}. The calculated LECRs for the construction worker are 6×10^{-6} (ingestion), 2×10^{-7} (dermal contact), and 1×10^{-9} (inhalation). Benzo(a)pyrene was responsible for more than half of the LECR. Benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and

arsenic accounted for a third of the LECR. The USEPA also uses a hazard quotient of 1 for noncarcinogenic effects in order to determine if remediation is necessary. The hazard quotient for the landfarm was calculated at 0.5. Hazard indexes (HIs) are 0.4 (ingestion) and 0.1 (dermal). A HI could not be calculated for the inhalation pathway because appropriate toxicity values were not available. The HI for the inhalation pathway is expected to be insignificant compared to the other exposure routes based on low average daily intakes. The total LECR and HI for a hypothetical future site worker are 6×10^{-6} and 0.5. Ingestion was the predominant exposure route. Because the risk values are within or below the regulatory target values, G&M concluded that the landfarm area may be developed for industrial use without significant threat to the environment or human health (Ref. 67, p. 7-2, 9-1).

Based on data from the available monitoring wells, release of constituents from the landfarmed soils to groundwater has not occurred. Runon/runoff controls at the landfarm prevent release to nearby surface water and sediment. Current or future exposure to these media was not identified as pathways of concern associated with the landfarm.

During the 1990 sampling, two composite surficial soil samples were collected and analyzed for polychlorinated dibenzodioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) and their respective chlorinated homologues and 2,3,7,8-congeners. For the risk assessment report the PCDD and PCDF data were reduced using a toxicity equivalency factor (TEF) scheme. The end result is a concentration expressed as a 2,3,7,8-tetrachlorodibenzodioxin (TCDD) equivalent concentration. Using this scheme, TCDD equivalent concentrations of 2.27 ug/kg and 3.14 ug/kg were detected in LF1 and LF2, respectively. These values are slightly above the 1.0 ug/kg recommendation for residential soil by the Centers for Disease Control. Cleanup values for industrial soil typically have been higher than those detected at the site. Therefore, the concentrations of PCDDs and PCDFs detected at the site were considered acceptable (Ref. 67, p. 3-4).

An ecological assessment was completed to determine if constituents detected at the landfarm have the potential to adversely affect the ecosystems at and/or surrounding the site. The adjacent Cape Fear River supports a diverse aquatic community; however, berms surrounding the landfarm areas restrict runoff from the site and hence exposure. Ecological impacts by the landfarms are limited by their relatively small size and surrounding development. Invertebrates, small mammals, and birds have the greatest potential for exposure. The potential for threatened or endangered species to be impacted by the site appeared limited. Future development will prevent exposure to ecological receptors.

In February 1994, the North Carolina State Environmental Epidemiology Section (EES) reviewed the soil sample results used by G&M, Inc. in the Risk Assessment Report to calculate the LECR (Ref. 60). The EES disagreed with G&M's finding and stated that the LECR for the future site worker of 6×10^{-6} is not acceptable. The generally accepted LECR is 1×10^{-6}. EES noted that is was assumed that the future use of the site would be industrial. In order to protect public health, all future land uses (including residential) must be considered. Exposure point concentrations for the following constituents are above what is considered acceptable for residential use. ESS suggested the following remediation levels:

Contaminants	Remediation Levels (mg/kg)
Benzo(a)anthracene	0.87 mg/kg
Benzo(a)pyrene	0.088 mg/kg
Benzo(b)fluoranthene	0.87 mg/kg
Benzo(k)fluoranthene	8.8 mg/kg
Dibenzo(a,h)anthracene	0.088 mg/kg
Indeno(1,2,3-cd)pyrene	0.87 mg/kg
Pentachlorophenol	5.3 mg/kg
TCDD equivalents	0.0043 ug/kg

In a letter dated March 1994, NCDEHNR suggested that SWP in conjunction with COW and NCSPA, provide detailed information showing that the property would be used for industrial purposes (Ref. 59). This would allow the remedial concentration values for the surficial soils to be increased. Dr. Williams of ESS indicated that the following concentrations are acceptable in industrial soils without cover:

Contaminants	Remediation Levels
Benzo(a)anthracene	3.9 mg/kg
Benzo(a)pyrene	0.39 mg/kg
Benzo(b)fluoranthene	3.9 mg/kg
Benzo(k)fluoranthene	39.0 mg/kg
Dibenzo(a,h)anthracene	0.39 mg/kg
Indeno(1,2,3-cd)pyrene	3.9 mg/kg
Pentachlorophenol	24.0 mg/kg
TCDD equivalents	0.019 ug/kg

At one or more onsite locations, the maximum soil concentrations of each of the above 7 semi-volatile parameters detected exceed the acceptable levels quoted by ESS. In particular, benzo(a)pyrene exceeded the EES limits in all treated and untreated wood storage areas, in both landfarm areas, the drainage ditch, and the mouth of Greenfield Creek. TCDD in the landfarm soils also exceeded the provided TCDD equivalent limits (Ref. 4, p. 31). With cover, where no exposure is possible, existing levels may be acceptable. Otherwise, the industrial or residential levels apply. These levels not only apply to the landfarm area, but the wood storage areas as well.

13.15 Phase III Groundwater Investigation

The Phase III Groundwater Investigation conducted by ViroGroup, Inc. began in October 1993 (Ref. 15) to further define the horizontal and vertical extent of impacted groundwater. Phase III activities included the abandonment (MW-24) and replacement of one monitoring well (MW-24R), installation of four shallow aquifer monitoring wells (MW-27 through MW-30), and seven intermediate aquifer monitoring wells (MW-11B, MW-14A, MW-20A, MW-22A, MW-24A, MW-28A, and MW-29A). In addition, soil sampling, groundwater sampling, and collection of

sequential groundwater elevations to evaluate the tidal effects on the shallow and intermediate aquifer flow regimes were conducted during Phase III activities.

Visual soil staining was observed in the wood treatment area (MW-11B) to 1 foot below the top of the peat (17 feet below land surface) and in the covered ditch area (MW-14A) to 14.5 feet below the top of the peat (22 feet below land surface). Visual staining was also observed in the large storage tank area (MW-22A) between 4 and 6 feet below land surface and in the trash dump area (MW-24A) between 7 and 12 feet below land surface.

Previous sediment sampling in Greenfield Creek indicated a total wood-preserving constituent concentration of 6,110 mg/kg dw at SS-10. This analytical result was suspect because the laboratory result was a magnitude higher than other samples collected in Greenfield Creek and field observations were not indicative of higher levels of contamination. A second sediment sample (SS-10A) was collected and analyzed to verify the constituent concentrations. The results from the resample indicated a concentration of 45.3 mg/kg dw, which is consistent with other samples collected in Greenfield Creek.

Groundwater samples indicated that dissolved arsenic, chromium, and copper were below laboratory detection limits. Organic constituents detected included acenaphthene, anthracene, carbazole, fluoranthene, naphthalene, phenanthrene, benzene, ethylbenzene, m/p xylene, o-xylene, and toluene. Free product thickness was measured at 0.01 feet in MW-11, 0.41 feet in MW-14, 0.23 feet in MW-22, and 5.24 feet in MW-26.

The areas of free product and elevated dissolved constituent concentrations occurred in proximity to the wood treatment area, covered ditch, and the large storage tank area. Dissolved organics appear to have migrated from the wood treatment and covered ditch areas to the on-site drainage ditch and Greenfield Creek. Dissolved constituents have also migrated vertically through the peat and into the intermediate aquifer and are migrating southeast. The dissolved constituents from the large storage tank area are migrating to the west toward the Cape Fear River.

Surface water samples have been collected routinely from the Cape Fear River since December 1985 (Figure 16 and Figure 20). One upgradient, two sidegradient, and one downgradient sample have been collected on 15 occasions through January 1994 (Table 9-1). The upgradient sample near U.S. Highway 74 has been below laboratory detection limits since initiation of surface water sampling activities. Surface water samples collected near the old slip have been below laboratory detection limits, except on two occasions. Copper was detected at 0.02 mg/l in June 1988 and chromium was detected at 0.011 mg/l in January 1990. Constituents were also detected on two occasions near the mouth of Greenfield Creek. Naphthalene was detected at a concentration of 0.05 mg/l in June 1989. A resample in July 1989 was below the laboratory detection limit. Chromium and copper were detected at 0.046 mg/l and 0.052 mg/l, respectively in July 1990. The downgradient sample near the NCSPA has been below laboratory detection since initiation of sampling in December 1985.

Multiple groundwater levels were collected from each monitoring well and staff gauge to evaluate the effect of tidal influences on the groundwater flow direction(s) in the shallow and

intermediate aquifers. The results of this investigation are described in the Tidal Effects Section 5.6 of this report.

13.16 Site Inspection Prioritization

The NCDEHNR conducted a Site Inspection Prioritization (SIP) in January 1995 for the purpose of collecting sufficient information to assess threats to human health and the environment (Ref. 4). The scope of the SIP included a file review, site walkover and examination of available analytical data. No sampling took place during the investigation. Based on the information collected, the site was recommended as a high priority for an Expanded Site Inspection (ESI) under CERCLA.

Identified source areas included the former creosote, PCP, and CCA storage and treatment areas, outdoor wood storage areas, former drainage ditch, and landfarm areas. The principal contaminants in the source area soils included semi-volatile organic compounds and CCA (Ref. 4, p. 8, 9). The organic compounds detected include acenaphthene, chrysene, acenaphthylene, dibenzo(a,h)anthracene, benzo(a)anthracene, fluoranthene (benzo(b,k)fluorene), benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(b,k)fluoranthene, and phenanthrene. Inorganic compounds detected include arsenic, chromium, and copper.

The creosote source areas, despite having been excavated, are still considered sources because 1) excavated soils were not physically removed from the site, and 2) investigation results indicate release of contaminants from these areas to groundwater and to surface water.

Soil sampling in the former wood storage areas detected organic and arsenic contamination at levels above Cancer Risk Screening Concentrations. Non-treated wood storage area A and treated wood storage area A contain arsenic and copper in excess of 3 times background level. The maximum arsenic levels at the site are in excess of the minimum health-based benchmark concentrations for human soil exposure of 0.33 mg/kg.

Landfarm soils contain benzo(a)pyrene and PCP that exceeds current health-based Cancer Risk Screening Concentrations for human soil exposure. The landfarm soils also contained detectable polychlorinated dibenzodioxins and dibenzofurans. The totals for these compounds exceeded health-based benchmarks for human soil exposure.

In groundwater, the maximum detected concentrations for benzene, benzo(a)pyrene, and arsenic exceeded their respective EPA Cancer Risk Screening Concentrations. Acenaphthene and fluoranthene (benzo(b,k)fluoranthene) exceeded their Reference Dose Screening Concentrations. The metals chromium and lead exceeded their Maximum Contaminant Level/Maximum Contaminant Level Goals (MCL/MCLG) for groundwater.

The shallow and intermediate aquifers contain organic and (locally) inorganic wood-preserving residuals. These aquifers are not used as a drinking water source and are separated from bedrock by a clay layer over 2 feet thick. The underlying sandy limestone bedrock (Pee Dee Formation) is a principal confined aquifer in the area, however, most groundwater use occurs more than 2

miles upgradient from the site. The presence of subsurface contamination at the site is not believed to be a likely threat to any drinking water supplies (Ref. 4, p. 18).

The 1985 Cape Fear River sediment sample contained several semi-volatile organic compounds. Contaminants were also detected in several of the sediment samples collected from the drainage ditch and Greenfield Creek.

The site drains to the Cape Fear River directly and via a drainage ditch and Greenfield Creek. Site constituents have been detected in the sediments of the Cape Fear River, Greenfield Creek, and the existing drainage ditch. The upper end of the drainage ditch is one of multiple probable points of entry (PPEs) to the surface water pathway, but it is the primary one, draining the majority of the site. Two other possible sources of semi-volatile contaminants have been identified over 0.5 miles upstream of the site, but the Greenfield Creek contamination may be at least partially attributable to the site. Runoff from the jetty area and from a small portion of the TWS areas is to the Cape Fear River via a second PPE along the southern boat slip.

No surface water intakes for public supply operate within 15 miles upstream or downstream of the site. Surface water samples have been collected from the Cape Fear River on a regular basis. In general, no site related organic or inorganic parameters were detected in the Cape Fear River surface water.

The Cape Fear River and Northeast Cape Fear River systems are commercial and recreational fisheries. Greenfield Creek is also fished recreationally. In the Wilmington area, transient american shad, hickory shad, and herring are taken for human consumption. Sport and subsistence fishing also yield resident largemouth and striped bass, flathead and blue catfish, and redbreast sunfish. Marine Fisheries officials report that the Cape Fear River at Wilmington is a nursery for commercially harvested blue crab, eel, and shrimp.

Wetlands adjacent to the site are within downstream limits of detected SVOC contamination. Ten rare animals and 8 rare plant species are identified within the pathway. One animal and 2 plants species are threatened in NC and/or the US.

Air monitoring has occurred only during active contractor subsurface exploration, when recovered soil samples were screened in the field for the presence of volatile organic compounds. Elevated volatiles were detected, however, the detected volatiles were at depth. The site is vegetated and no odors or visual evidence of wood-preserving materials or blowing particles were observed during the 1994 site reconnaissance.

The site is currently inactive and vacant of SWP or other employees. The site is accessible on foot or by boat. The nearest residences are 400 feet east of the site. The total population residing within 0.25 miles of the site is estimated to be 527. No schools or day care facilities are present within 0.2 miles of the site. A recreation field (Optimist Park) is located directly southeast of the site, but is separated from the site by a railroad grade, thick vegetation, and by the existing on-site drainage ditch. Under present conditions the threat of human exposure to soil or air contamination at the site appears to be minimal.

13.17 Soil, Sediment, and Surface Water Assessment

This assessment originated from a May 24, 1995 meeting between SWP, COW, NCSPA, NCDEHNR, and the Region IV USEPA. The scope of work performed during this assessment also addressed recommendations suggested in a January 31, 1995 letter from the NCDEHNR to the USEPA that summarized the SIP (Ref. 4, cover letter).

Site soils in the main production area (PDA) and treated wood storage area B (TWSB) were grided and sampled (Ref. 71). A total of 78 boreholes were completed to a depth of 18-inches below land surface. Each soil boring was described for degree of staining and odor and logged according to the Unified Soil Classification Scheme. Twenty-six of the boreholes (1/3) were randomly selected for chemical analysis. A soil sample was collected from the 0- to 6-inch and 12- to 18-inch intervals at each selected borehole (total of 52 soil samples).

In the main production area visual observations indicated that 21 of the soil borings had no staining or odor, 3 soil borings had a faint odor, and 9 soil borings were discolored. In TWSB visual observations indicated that 44 of the soil borings had no staining or odor and 1 of the soil borings was discolored. Constituents detected in the PDA and TWSB areas included acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, carbazole, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, ethylbenzene, xylenes, arsenic, chromium, and copper.

Total organic carbon (TOC) samples were collected to evaluate the bioavailability of organic compounds on site. The average total organic carbon concentration from 6 soil samples was 27,467 mg/kg dw.

Soil samples were collected from each landfarm area to evaluate continued degradation of wood-preserving constituents in the landfarm materials since last sampled in 1991. The results indicated a decreasing trend in constituent concentration levels. Total wood-preserving constituent concentrations in LF1 decreased from 497.8 mg/kg dw in 1991 to 107.1 mg/kg dw in 1996 and in LF2 from 1,354.7 mg/kg dw to 131.5 mg/kg dw. Comparison of dioxin and furan samples indicated that the total concentrations have remained relatively consistent. Noteworthy changes in concentration included a decrease in the 2,3,7,8-tetrachlorodibenzodioxin congener at LF1 from 0.004 ug/kg dw to 0.0024 ug/kg and a decrease at LF2 from 0.008 ug/kg dw to 0.0042 ug/kg dw.

One surface water sample from the on-site drainage ditch, three surface water samples from Greenfield Creek, and one surface water sample from a southern tributary to Greenfield Creek were collected. Surface water samples were also collected from the Cape Fear River. All of the surface water samples were below laboratory detection limits for all site-related constituents of concern.

Sediment samples (0 to 6 inches) were collected in a southern tributary to Greenfield Creek and in the Cape Fear River. Discolored soils were limited to the background location along the Cape Fear River. Sediment samples from the southern tributary to Greenfield Creek contained a

strong hydrogen sulfide or sewage type odor. When these sediment samples were collected, the water in the southern tributary appeared cloudy with a bluish-gray color that was distinctively different from Greenfield Creek and the on-site drainage ditch.

In the 24 sediment samples (1992 and 1996) collected at the site, detected constituents include acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, carbazole, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, dichloromethane, 1,2-dichloropropane, ethylbenzene, toluene, xylenes, arsenic, chromium, and copper.

The Cape Fear River background sediment sample at the Highway 74 bridge has a total organic wood-preserving concentration of 145.06 mg/kg dw. Chromium, copper and arsenic were detected in almost every sediment sample. The average concentration in the sediment is 4.6 mg/kg dw arsenic, 18.9 mg/kg dw chromium, and 19.3 mg/kg dw copper. The concentrations of arsenic, chromium, and copper detected in the sediment samples are in the acceptable range for background concentrations.

To evaluate bioavailability of inorganic constituents in the sediments, nine sediment samples were collected for grain size, total organic carbon, and acid-volatile sulfide with simultaneous extracted metals (AVS-SEM) analysis. Coarse grain sediments were the predominant size in all of the samples. A comparison between grain size distribution in the sediment samples collected in the drainage ditch, Greenfield Creek, and the Cape Fear River, indicate that the grain size decreases as the flow velocity of the water body decreases. The average total organic carbon concentration from the sediment samples was 36,756 mg/kg dw.

13.18 Human Health and Ecological Risk Assessment

ChemRisk, a Division of McLaren/Hart Environmental Engineering Corporation, was retained by SWP to perform a human health and ecological risk assessment for the Wilmington, North Carolina site (Ref. 39).

In the human health risk assessment, theoretical upper-bound incremental lifetime cancer risks and non-cancer hazards were evaluated for three hypothetical future use scenarios where a human could possibly be in contact with or affected by the environmental conditions at the site. The three scenarios evaluated included: 1) construction/utility repair worker, 2) adolescent trespasser, and 3) recreational angler. Results from the evaluation indicated that carcinogenic risks for the typical exposed individual ranged from 3.0×10^{-6} to 1.5×10^{-5}, and risks for the high end exposed individual were estimated within the range of 7.2×10^{-6} to 6.6×10^{-5}. Comparison with USEPA's acceptable cancer risk range of 1×10^{-6} to 1×10^{-4} indicates that human health risks associated with the site are insignificant. Benzo(a)pyrene comprises the highest proportion of the risk for both the typical (63-73% of the total risk) and high end (58-77% of the total risk) exposed individuals. For the landfarm construction scenario, 2,3,7,8-TCDD equivalents accounted for 87% of the risk estimate for the typical exposed individual, and 81% for the high end exposed individual.

All noncancer hazards were below the noncancer hazard index (HI) risk benchmark of 1, indicating that site-related constituents do not pose a noncancer human health hazard. For the

site wide construction/utility repair worker, HIs ranged from 1.4×10^{-1} (typical) to 2.8×10^{-1} (high end). For the landfarm construction/utility repair worker, HIs ranged from 1.4×10^{-2} (typical) to 5.9×10^{-2} (high end). For the adolescent trespasser, HIs ranged from 3.6×10^{-3} (typical) to 8.7×10^{-3} (high end). Noncancer risk estimates for the adult recreational angler were not generated due to the lack of available noncancer health criteria.

ChemRisk also completed a screening-level ecological risk assessment (ERA) for the site. The ERA concluded that the sampling efforts conducted at the site have sufficiently characterized the nature and extent of chemicals in various environmental media. Moreover, the results indicate that the ecological risks from the chemicals of concern are limited to sediment PAHs, as summarized below:

- Concentrations of organic compounds and metals in surface water were consistently non-detect.

- Concentrations of metals in ditch/creek system sediments were consistently below sediment quality benchmarks. Cape Fear River sediments contained metals that infrequently exceeded benchmarks, and were largely within the background range of concentrations.

- The presence of petrogenic (petroleum-related) and pyrogenic (combustion-related) PAHs were ubiquitous in sediments throughout the study area. A preliminary evaluation of type and pattern of sediment PAH suggested that other sources of these compounds might be present. Thus, the site is not likely to represent the sole source of PAH to the surrounding environs.

An evaluation of the local habitat and communities identified several differences between the ditch/creek and the Cape Fear River, which influence potential exposure of resident or migratory biota:

- The identified rare/threatened species have limited exposure to the ditch/creek sediments because: 1) these species occupy more terrestrial, wetland, or lake habitat than available in the ditch/creek area, 2) they are currently not present at the site, and 3) their access to the site is physically limited as a result of the Greenfield Lake dam or the Greenfield Creek tidal gate.

- In addition to the rare species, the indigenous, commercially, and recreationally important fish and invertebrate communities of the Cape Fear River are not exposed to sediments in the ditch/creek due to the presence of the Greenfield Creek tidal gate.

- As a result of the tidal gate, current water quality and biological observations indicate that the ditch/creek system is predominately freshwater, has only a limited benthic community, and does not provide habitat to support a balanced, indigenous fish community.

Ecologically significant exposure pathways at the site are a result of: 1) the bioavailability of chemicals of potential concern in sediments; 2) direct contact and ingestion of sediments with

biota; and 3) bioaccumulation through consumption of potentially contaminated prey. It is clear from evaluating these exposure pathways that:

- Overall, the factors controlling the bioavailability of sediment metals appears sufficient in reducing availability, and subsequently, risk to aquatic organisms.

- The bioavailability of sediment PAHs to aquatic organisms in the ditch/creek system and Cape Fear River is reduced at several locations, thereby reducing potential exposure to aquatic organisms.

- The ability of most aquatic organisms to metabolize PAHs suggests that these chemicals are not likely to impact higher trophic level communities through the consumption of potentially impacted prey. The concentration of total organic carbon is sufficient to reduce the risk of PAH bioavailability to benthic organisms. This reduces the threat to higher trophic organisms through ingestion of benthic organisms that may have absorbed sediment PAH through ingestion or direct contact.

Based on the screening-level ERA, it is apparent that potential risks from PAH exposure via bioaccumulation are insignificant for higher trophic organisms. However, hazard quotients calculated for benthic macroinvertebrates indicate potential risks to this community via direct contact and ingestion of sediment PAH.

13.19 Expanded Site Inspection

On July 16, 1997 Black and Veatch Special Projects Corporation (BVSPC) completed an Expanded Site Inspection (ESI) at the Wilmington, North Carolina site (Ref. 2). The ESI sought to further define the possible pathways by which contamination could migrate from the site and the populations and environments it potentially affects, as well as, to provide information needed to evaluate the site using the Hazard Ranking System (HRS) scoring strategies. The USEPA reviewed the ESI on August 12, 1997 and noted that the site required further action.

BVSPC installed 12 groundwater monitoring wells. Four of the wells were screened in the shallow aquifer, four wells were screened in the intermediate aquifer, and the remaining four wells were screened in the deep aquifer.

During the investigation 31 groundwater, 8 surface water, 21 surface soil, 21 subsurface soil, 18 sediment, and 3 biological tissue samples (fish) were collected and analyzed. The biological tissue samples were analyzed for pesticides, PCBs, and semi-volatile organics. All other samples collected were analyzed for semi-volatile and volatile organic compounds, pesticides, PCBs, cyanide, and metals. Seven of the 21 surface soil samples were analyzed for dioxins and furans. Sessile benthic samples were not collected due to the absence of habitat and organisms. Samples containing concentrations of contaminants greater than 3 times those of the background sample were considered elevated by BVSPC. In the case where there was no detection of a contaminant at the background location, any sample with a concentration above its sample quantitation limit (SQL) and above the background SQL was also considered elevated by BVSPC.

Surface soil analytical data indicated elevated concentrations of semi-volatile organics, pesticides, PCBs, dioxins/furans, and inorganics. Subsurface soil data indicated semi-volatile and volatile organics, pesticides, PCBs, and inorganics. Surface water samples contained pesticides, PCBs, and inorganics. Ground water samples from the shallow, intermediate, and deep aquifers contained semi-volatile and volatile organics and inorganics.

The area of soil impact is approximately 35 acres from the north central to the southeastern portion of the site. Included are areas which were once utilized for wood preserving and wood storage activities, the large storage tank area, the creosote treatment area, the covered ditch, small diesel storage area, and landfarming area.

The groundwater pathway is of moderate concern. Elevated levels of semi-volatile and volatile organics and pesticides were detected in the shallow and intermediate groundwater wells. Acenaphthene and fluorene were detected at elevated levels in the deep groundwater wells. Inorganic analytes were detected at elevated levels in the shallow, intermediate, and deep wells.

The surface water pathway is of primary concern and was evaluated based on site-related contaminants detected in the drainage ditch, Greenfield Creek, and the Cape Fear River. Elevated concentrations of pesticides, PCBs, and inorganics were detected in the surface water. Sediment samples revealed elevated concentrations of semi-volatile and volatile organics, pesticides, PCBs, and inorganics. The U.S. threatened American alligator, U.S. and North Carolina endangered West Indian manatee, and federally endangered shortnose sturgeon have been identified and reported in the Cape Fear River estuary. Seven commercial fisheries are located along the Cape Fear River between Eagle Island and the Atlantic Ocean. Recreational fishers and boaters use the Cape Fear River.

Soil exposure and air pathways are of minimal concern due to several factors including a lack of resident population, presence of vegetative cover on the site, and lack of an observed release. Elevated levels of semi-volatile organics, pesticides, and dioxin/furans were detected in the surface soil samples. The Toxicity Equivalency Values (TEQ) for 2,3,7,8-tetrachlorodibenzodioxin, ranged from 0.250 to 3.1 ug/kg. Elevated levels of semi-volatile and volatile organics and pesticides were detected in the subsurface samples. Inorganic analytes were detected at elevated levels in all surface and subsurface soil source samples when compared to background levels of naturally occurring levels for the area. The highest concentration and frequency of detection were found near the former treatment areas and near the former large storage tank area.

14.0 PROCEDURES FOR SITE CHARACTERIZATION

The procedures used for characterizing site geologic and hydrogeologic conditions and identifying and delineating each contamination source as to each affected medium, including special assessment such as geophysical survey are included in the above completed and on-going environmental assessments summaries. A detailed narrative on procedures used in each previous environmental assessment is located in each referenced report. Procedures used include literature and file reviews, monitoring well installation, and soil, sediment, surface water, and groundwater sampling. No special assessments (i.e., geophysical survey) have been conducted at the site.

15.0 METHODS, LOCATIONS, DEPTHS, AND JUSTIFICATION FOR ALL SAMPLE COLLECTION POINTS FOR ALL MEDIA SAMPLED

Sample identification, date sampled, media sampled, location, depth, justification, consultant, parameters, and analytical method for all sample collection points are listed in the Sample Database Summary Table (Table 1).

16.0 FIELD AND LABORATORY PROCEDURES FOR QA/QC

16.1 Geotechnical Investigation

Field and laboratory procedures for QA/QC were not listed for the groundwater samples collected by S&ME in 1981.

16.2 North Carolina Department of Human Resources

Field and laboratory procedures for QA/QC were not listed for the soil samples collected by North Carolina Department of Human Resources in 1982.

16.3 Site Screening Investigation

Sample collection, sample preservation, and chain-of-custody procedures used during the SSI were in accordance with standard operating procedures as specified in the Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual (Draft), USEPA, Region IV, Environmental Services Division, August 1980 and all revisions to the SOP addressed in the following correspondence:

Blackwell, P. (October 21, 1983) Changes in Sampling Procedures,
Lair, D. (September 10, 1984) Solvents Used to Clean Sampling Equipment, and
Wilson, C. (December 14, 1983) Region IV Sampling SOP Revisions.

Laboratory analyses and laboratory quality assurance procedures were in accordance with standard operating procedures and protocols as specified in Analytical Support Branch Operations and Quality Assurance Manual, USEPA, Region IV, Environmental Services Division, April 1982; or as specified by the existing USEPA standard procedures and protocols for the contract analytical laboratory program, 1982.

16.4 Phase I, II, and III Groundwater and Soil, Sediment, and Surface Water Assessments

Field QA/QC for the Phase I, Phase II, and Phase III groundwater assessments and the soil, sediment, and surface water assessments completed by ETE, Inc. and ViroGroup, Inc. are listed in the Sampling and Analysis Plan (S&A) for the Wilmington, North Carolina Facility (Attachment I). The S&A plan as been a dynamic document and has been kept current starting with the original 1980 USEPA Region IV manual titled Engineering Support Branch Standard Operating Procedures and Quality Assurance Manual (SOP). The S&A plan was revised again

in 1986 with revisions to the SOP. The Region IV USEPA revised the SOP in 1991 with the Environmental Compliance Branch Standard Operating Procedures and Quality Assurance Manual (ECBSOPQAM), and in 1996 with the Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM). The Wilmington S&A plan is current with the 1996 EISOPQAM.

Field quality control samples (minimum of 1 for every 20 samples) were collected during soil, sediment, groundwater, and surface water sampling to assess field techniques and laboratory performance. These samples included rinsate blanks, field blanks, and trip blanks. The soil, sediment, and surface water sampling beginning in 1996 included one duplicate sample per medium per container type per field day. Samples for volatile analysis were collected directly into sample containers without mixing. A chain-of-custody accompanied all samples to the laboratory. All samples were shipped overnight delivery to the laboratory. All sample locations were staked in the field using a surveyors nail. A North Carolina Registered Land Surveyor surveyed the monitoring well locations. Groundwater samples for both dissolved and total metals were analyzed through 1996. Only total metal analyses were completed since 1996. All drill cuttings, well development, purge, and decontamination water was containerized and disposed in accordance with RCRA requirements.

Laboratory analysis was completed by Savannah Laboratory and Environmental Services, a North Carolina certified laboratory. Laboratory quality control included sample identification, log number, date samples received, detection limits, method blank, accuracy (mean % recovery), precision (% RPD), analyst initials, USEPA method numbers, date extracted, date analyzed, dilution factor, sample quantitation limits, date reported, and the project manager's signature. Samples received were checked for condition of containers and required temperature. Analytical data were reviewed for the completeness of the data package deliverables and the achievement of project-specific data quality objectives. All soil, groundwater, and quality control samples were analyzed within the required holding times and complied for all procedures outlined in USEPA methodology. All quality control samples were found to be within established control limits. The Savannah Laboratories and Environmental Services Quality Assurance Plan (QAP) was followed for all sample analysis (Ref. 72).

16.5 Landfarm and Wood Storage Area Assessments

Soil sampling was completed by Geraghty & Miller, Inc. in the landfarm area in 1990 and 1991 and in the treated (TWS) and non-treated wood storage (NTA and NTB) areas in 1991. Section 3.0 of each G&M, Inc. report describes the soil and groundwater sampling QA/QC, laboratory analyses and QA/QC practices, chain-of-custody, and data validation (Ref. 16, Ref. 67, Ref. 68, and Ref. 69).

16.6 Expanded Site Inspection

Black & Veatch Special Projects Corporation followed the 1991 ECBSOPQAM for all sample collection, sample preservation, and chain-of-custody procedures. All laboratory analyses and laboratory quality assurance procedures and protocols followed the Analytical Support Branch's Laboratory Operations and Quality Control Manual, USEPA Region IV Environmental Services

Division, October 1990 or as specified by the USEPA standard procedures and protocols for the Contract Laboratory Program (CLP).

17.0 ANALYTICAL PARAMETERS AND ANALYTICAL METHODS FOR ALL SAMPLES

The analytical parameters sampled for each media are listed in Summary Tables 2 through 9 and in analytical reports located in Attachment J. Analytical methods for all samples are listed on the Sample Database Summary Table (Table 1) and with the analytical results located in Attachment J.

18.0 CONTACT NAME, ADDRESS, AND TELEPHONE NUMBER OF PRINCIPAL CONSULTANTS

18.1 Principal Consultants

1) Schnabel Engineering Associates, Inc.
Contact - Gregory B. Kuntz, P.G., Project Manager
104 Corporate Blvd., Suite 420
West Columbia, SC 29169
Telephone: 803-796-6240
Fax: 803-796-6250

Schnabel Engineering Associates, Inc. is a North Carolina Corporation, a Registered Engineering and Geology Firm (F-0678) with the North Carolina State Board of Registration for Professional Engineers and Land Surveyors, and a Registered Environmental Consultant (#00041) under the North Carolina Inactive Hazardous Waste Site Program.

Gregory B. Kuntz is a North Carolina Registered Geologist (#1203) and a Registered Site Manager under the North Carolina Inactive Hazardous Waste Site Program.

Rich Wargo is a North Carolina Registered Engineer (#23435) and the office manager.

2) Savannah Laboratories and Environmental Services, Inc.
Contact - James W. Andrews, Ph. D., Project Manager
5102 LaRoche Avenue
Savannah, GA 31404
Telephone: 912-354-7858
Fax: 912-352-0165

Savannah Laboratories and Environmental Services, Inc. in accordance with the provisions of N.C.G.S. 143-215.3 (a) (1), 143-215.3 (a) (10), and NCAC 2H.0800 is certified to perform environmental analysis and report monitoring data to the Division of Water Quality, North Carolina Department of Environment and Natural Resources (Ref. 72).

19.0 EQUIPMENT AND PERSONNEL DECONTAMINATION PROCEDURES

19.1 Equipment Decontamination Procedures

Decontamination procedures were implemented to avoid cross-contamination of subsurface strata and samples of various media that were collected. Drill rigs and all drilling and sampling equipment were thoroughly cleaned and decontaminated before initial use and between sample locations.

A designated cleaning/decontamination station was established prior to beginning remedial assessment activities. This decontamination area was located downgradient and down wind from the clean equipment drying and storage area. The decontamination area contained a polyethylene lined waste pit to contain the rinse water and waste materials until they could be collected. All cleaning of drill rods, auger flights, well screens, and casings occurred over polyethylene sheeting using saw horses or other appropriate means. At the completion of drilling activities all waste materials and polyethylene were removed from the decontamination pit and disposed in appropriate investigation derived waste (IDW) containers. At the end of assessment activities, the decontamination pit was returned to original grade.

All drilling rigs, drilling and sampling equipment, backhoes, and all other associated equipment involved in assessment activities were cleaned and decontaminated before entering designated activity areas and prior to leaving the site. The drill rig and drill rods/augers were steamed cleaned between each borehole.

All well construction materials and tools, downhole sampling tools, and associated equipment were cleaned and decontaminated by the following procedures (unless the materials arrive on-site, certified clean, and in original undamaged packaging):

1) Steam clean with potable water and laboratory grade, phosphate-free detergent, using a brush, if necessary.
2) Rinse thoroughly with potable water.
3) Rinse thoroughly with deionized water.
4) Rinse twice with pesticide grade isopropanol.
5) Rinse with organic-free water and allow to air dry.
6) Wrap with aluminum foil to prevent contamination, if storing or transporting the equipment prior to use.

Organic-free water should contain no pesticides, herbicides, extractable organic compounds, and less than 50 ug/l of purgeable organic compounds. In addition, no metals or other organic compounds should be detected at routine detection limits. Deionized water, organic-free water, and isopropanol must be applied using non-interfering containers made of glass, Teflon, or stainless steel.

The electronic water-level indicator was decontaminated as follows:

1) Wash with laboratory detergent and potable water.

2) Rinse with potable water.
3) Rinse with deionized water.
4) Place in a clean polyethylene bag to prevent contamination during transit or storage.

For sampling equipment (stainless steel spoons, bowls, knives, split-spoon sampler, etc.) a second phase of the main decontamination routine was performed:

1) Wash equipment with non-phosphate detergent.
2) Rinse with potable water.
3) Rinse with 0.1 N nitric acid (non-metallic utensils).
4) Rinse with pesticide grade isopropanol.
5) Rinse twice with deionized/distilled water.
6) Rinse once with organic free water.
7) Allow to air dry.
8) Wrap with aluminum foil and plastic to prevent contamination before use.

Following completion of decontamination, if decontaminated equipment touched the ground, it was considered contaminated and required decontamination before use.

19.2 Personnel Decontamination Procedures

Pre-work and weekly health and safety tailgate meetings were conducted by the Health and Safety Officer assigned for each phase of the investigations. Personnel were instructed on the use of personnel protective equipment (PE). Level D protection was used in all investigations at the site. Personnel were instructed to wear rubber boots, Tyvek suits, and gloves appropriate for the tasks being completed. Instruction was given on how to provide protection against dermal, inhalation, and ingestion of potential contaminated materials. No smoking, eating or drinking were allowed when a potential for exposure was present. At task completion, breaks, or at the end of each day, the PPE was removed and placed in appropriate IDW containers. Decontamination consisted of a boot, hand, and face wash using detergent and potable water. A decontamination station including non-phosphate detergent, potable water, eye wash, fire extinguisher, first aid kit, emergency first aid guide book, and the task-specific health and safety plan was established adjacent to the decontamination basin. Mobile phones were maintained in most of the work trucks.

Personnel were instructed to stop work if the Health and Safety Officer determined that PE level higher than D was required. If an increase in PE is required, a decontamination program must be established that includes the necessary stations, barrier tapes, and decontamination and observation personnel. The corporate health and safety plan contains procedures and protocol necessary for decontamination when using higher levels of PE.

20.0 HEALTH AND SAFETY PLAN

A health and safety plan that conforms to OSHA 1910.120 requirements and assures that the health and safety of nearby residential and business communities will not be adversely affected by activities related to remedial investigation activities is presented in Attachment K.

21.0 SCHEDULE FOR SITE ACTIVITIES AND REPORTING

This report discusses only activities that have been completed. No schedule for site activities or reporting is necessary. The 1999 AOC contains a schedule for future requirements at the site.

22.0 OTHER INFORMATION REQUESTED BY NCDENR

No additional information has been requested by NCDENR at this time.

23.0 CERTIFICATION

In Southern Wood Piedmont Company's and Schnabel Engineering Associates, Inc. opinion and to the best of our knowledge and belief all information known or in possession or control of its officers, directors, employees, contractors, and agents has been fully and accurately disclosed which relates in any way to existing contamination or past release of contaminants at the site.

This report has been prepared solely and exclusively for Southern Wood Piedmont Company's and NCDENR's benefit and use for specific application to this project. The use of this report by a third party or parties will be at such party's sole risk and Schnabel Engineering Associates disclaims liability for any such use or reliance by third parties.

This report presents an assessment of the existing environmental conditions at the site based on conditions at the time of our evaluation and available information provided by other parties. Generally, information obtained from others is reliable. However, Schnabel Engineering Associates cannot warrant or guarantee information to be correct or accurate that was collected and/or provided by others.

The analysis and findings submitted in this report are based, in part, upon data obtained from subsurface exploration. The nature and extent of variations between boring and sampling locations may not be evident. Analysis and findings of this report are based on interpolation between data points and may not be representative of all subsurface conditions. Regardless of the thoroughness of an environmental assessment, there is always the possibility that conditions between borings are different from those at specific boring locations due to variability of subsurface conditions.

6-23-99

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Southern Wood Piedmont Company

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24.0 NARRATIVE ON HOW INVESTIGATIONS WERE CONDUCTED AND VARIANCES

A narrative discussion on work conducted is provided in Section 13 of this report. The only documented variances in proposed work occurred during the Expanded Site Inspection. Surface water sample SW-02 and sediment sample SD-02 was not collected due to inability to gain access to the sampling location. Biotic samples BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5 were not collected due to absence of sessile benthic habitats and organisms.

25.0 MONITORING WELL DESIGN

Monitoring well design, installation method, installation procedure, as-built well construction logs, well construction materials, and geologic logs are provided in Attachment D. No well installation permits were required to install monitoring wells at the site.

26.0 SITE MAP

A scaled site map showing all soil (Figure 14 and 15), surface water (Figure 16), sediment (Figure 13), and monitoring well locations (Figure 7) in relation to known disposal areas or other sources of contamination is presented. A Registered Land Surveyor surveyed the monitoring wells to a known benchmark.

27.0 LABORATORY QUALITY CONTROL AND QUALITY ASSURANCE

Laboratory QA/QC is presented in Section 16 of this report. QA/QC data is presented on the laboratory analytical data sheets in Attachment J.

28.0 INVESTIGATION DERIVED WASTE MANAGEMENT

Investigation derived waste (IDW) materials were generated during the field activities. Waste types included liquids, solids, and sludge. Since some of these materials may be hazardous wastes, they were handled, stored, treated, and disposed of properly. Materials that became IDW included:

1. Personnel protective equipment (PE) - coveralls, gloves, etc.
2. Cleaning fluids - spent solvent, wash water, etc.
3. Soil cuttings from well installation and sampling, etc.
4. Groundwater from sampling, development, etc.
5. Disposable equipment (DE) - bailers, plastic ground and equipment covers, aluminum foil, sample containers, sample boxes, tape, etc.

All visually or olfactory impacted soils and sludge were placed in lined roll-off containers for off-site disposal. The roll-off containers were covered to prevent accumulation of precipitation. All liquids were solidified with kiln dust. PE and DE were placed in the roll-off with the solid IDW. A hazardous waste label was placed on each roll-off on the first day in which any waste

was added to the container. An in-house waste generation form was also completed at this time and updated as necessary. Weekly inspections of the containers occurred until the waste was disposed. These inspections were documented on the waste generation form. The waste materials were stored no more than 90 days from the date of first accumulation for each roll-off. The waste type was identified and the containers labeled with the proper D.O.T. placards, manifested, and shipped off-site to an approved waste disposal facility.

All non-hazardous IDW was disposed at the local sanitary landfill during and at the end of the remedial investigation activities.

Drums were used for waste disposal during the Expanded Site Investigation (Ref. 73, p. 31, 32, 33). In the ESI workplan it was proposed that the disposable equipment and cuttings would be placed in 55-gallon labeled drums segregated by borings. The drums were to be staged on-site awaiting disposal and disposed in accordance with the requirements specified in the Management of Investigation Derived Wastes During Site Inspections, USEPA, 1991. The ESI did not provide a narrative on drum disposal.

29.0 SITE GEOLOGIC CONDITIONS

Site geologic conditions are presented in Section 5.3 of this report.

30.0 SITE HYDROGEOLOGIC CONDITIONS

Site hydrogeologic conditions are presented in Section 5.5 of this report.

31.0 ANALYTICAL RESULTS

Tabulated analytical results for surface soils, subsurface soils, shallow aquifer groundwater, intermediate aquifer groundwater, deep aquifer groundwater, sediment, and surface water are presented in Tables 2 through 9, respectively. Tabulated analytical results for surface soil, subsurface soil, soil moisture (lysimeter), and column leachability studies collected during the operation of the landfarm are presented in Table 10. All laboratory reports are presented in Attachment J.

Constituents that exceed preliminary remedial action goals (see Section 32) for each media since sampling was initiated at the site are summarized below:

CONSTITUENTS	SOIL	GROUNDWATER	SEDIMENT	SURFACE WATER
Semi-Volatiles				
2,4-Dimethylphenol		X		
2-Chloronaphthalene	X			
2-Chlorophenol	X			
2-Methylnaphthalene	X	X		
2-Methylphenol		X		
3-and/or 4-Methylphenol		X		

CONSTITUENTS	SOIL	GROUNDWATER	SEDIMENT	SURFACE WATER
Acenaphthene	X	X		
Acenaphthylene	X			
Anthracene	X			
Benzo(a)anthracene	X	X	X	
Benzo perylene		X		
Benzo(a)pyrene	X	X	X	
Benzo(b)fluoranthene	X	X	X	
Benzo(b,k)fluoranthene	X	X		
Benzo(k)fluoranthene	X	X		
Benzo(g,h,i)perylene	X			
Carbazole	X	X	X	
Chrysene	X	X		
Cresol m&p		X		
Dibenzo(a,h)anthracene	X	X	X	
Dibenzofuran	X	X		
Fluoranthene	X	X	X	
Fluorene	X	X		
Indeno(1,2,3-cd)pyrene	X	X	X	
Naphthalene	X	X		
Pentachlorophenol	X	X		
Phenanthrene	X	X		
Pyrene	X	X		
Tetrachlorophenols	X			
Volatiles				
1,1,2,2-Tetrachloroethane		X		
1,1,2-Trichloroethane		X		
Acetone		X		
Benzene		X		
Bromodichloromethane		X		
Chloroform		X		
Ethylbenzene		X		
Methylene Chloride		X		
Inorganics				
Aluminum	X	X	X	
Antimony	X			
Arsenic	X	X	X	
Barium	X			
Cadmium	X	X		
Chromium	X	X		
Cobalt	X			
Copper	X		X	X
Cyanide	X			
Iron	X	X	X	X

CONSTITUENTS	SOIL	GROUNDWATER	SEDIMENT	SURFACE WATER
Lead	X	X		
Manganese	X	X		
Mercury	X			
Nickel	X			
Vanadium	X	X		
Zinc	X			
Pesticides/PCBs				
4,4'-DDD	X			
4,4'-DDE	X			
4,4'-DDT	X			
Aldrin	X			
Alpha-chlordane		X		X
Gamma-BHC (Lindane)	X			
Heptachlor	X			
PCB-1260 (Aroclor-1260)	X			X
Dioxins and Furans				
Toxicity Equivalent Value	X			

Several of the inorganics that exceed the preliminary remediation goals are within naturally occurring levels for these constituents (Reference 2, p. 50; Reference 70). These inorganics include aluminum, barium, iron, manganese, and vanadium.

32.0 SOIL, GROUNDWATER, SEDIMENT, AND SURFACE WATER CONTAMINANT DELINEATION

32.1 Surface Soil Contaminant Delineation

Surface soil contamination has been assessed by collecting random samples from a 100-foot grid pattern in the non-treated wood storage areas A and B, treated wood storage areas A and B, and the production area (Ref. 69 and Ref. 71). Soil samples were also collected by Black & Veatch (Ref. 2) from the landfarm, covered ditch, and the undeveloped portion of the property adjacent to Greenfield Creek (Figure 14).

No published remediation standards exist for soils in North Carolina. In lieu of applicable standards, the procedures for establishing preliminary and final soil remediation goals are listed in Appendix D of the 1998 Registered Environmental Consultant Program Implementation Guidance (RECIG; Ref. 74) for the Inactive Hazardous Waste Site Program of NCDENR. Preliminary soil remediation goals determined following guidance in the RECIG were used to produce a surface soil contaminant delineation map for this report (Figure 17).

Soil samples collected from operation areas prior to landfarming (1985) were not used for surface soil delineation. These soils were excavated and treated on the landfarm. Surface soil samples collected from the landfarm during active treatment were not used for surface soil

delineation, however, landfarm surface soil samples collected after active landfarming (1991) were used for delineation.

The preliminary soil remediation goals used for delineation are for unrestricted site use. The current deed (Attachment G) to the site restricts property use to industrial port-related operations. No residential or recreational uses are allowed on the property. The zoning for the site is Heavy Manufacturing (HM). The deed restriction has been listed in the New Hanover County Registry and can only be removed by an agreement signed by the USEPA and NCDENR. Because the site is restricted to industrial use, final soil remediation goals should not be as stringent as the unrestricted preliminary soil remediation goals. In addition, future site development by the NCSPA may include the placement of several feet of fill material on top of the impacted soils. The placement of a cover decreases the risk of contact and migration of impacted soils, which should also allow for less stringent final soil remediation goals.

Standard industrial/commercial remediation goals or site-specific exposure scenario and soil remediation goals will be proposed to NCDENR. The final soil remediation goals based on restricted land use will be determined in cooperation with NCDENR prior to remedy selection at the site.

Two soil remediation goals must be met to satisfy the requirements in the RECIG (Ref. 74, Appendix D): a "health-based" goal for total concentration of contaminants; and a "protection of groundwater" goal for residual contamination.

Health-based remediation goals have been established using current USEPA risk assessment guidance and are based on a lifetime excess cancer risk (LECR) of 1×10^{-6} (carcinogens) and a hazard quotient of 0.2 (non-carcinogens). Health-based goals are listed in Table D-1 of RECIG (Ref. 74). If a constituent is not listed in Table D-1, a health-based goal must be calculated using procedures outlined in Appendix E, section E.1 of RECIG. The calculated goal must be approved by NCDENR. Health-based soil remediation goals need to be calculated for acenaphthylene, benzo(g,h,i)perylene, carbazole, and phenanthrene. Carcinogenic PAH's not listed on Table D-1 can be screened (for delineation) using the remediation goal for benzo(a)pyrene (0.088 mg/kg). Non-carcinogenic PAH's not listed in Table D-1 can be screened using the remediation goal for pyrene (460 mg/kg). Some of the remediation goals listed in Table D-1 may be more stringent than natural background concentrations or method detection limits (MDL). Cleanup to below site-specific natural background concentrations (metals only) or MDL is not required. Site-specific natural background concentrations for metals have not been determined. Site wide data is sufficient for general background concentration evaluation (areas of impact stand out as obvious spikes in the data set). Guidance from NCDENR is not clear on how to determine a site-specific concentration value that will be considered naturally occurring. The naturally occurring value could be limited to background locations or it could be the median, average, or geometric mean of the entire data set or it could be determined using a control-chart. Quick calculations from the complete data set suggest that the geometric mean may be the most appropriate value, whereas, graphic representation of the data suggest that a control-chart would be the best method. However, no matter which value is used as naturally occurring, there will still be areas with naturally occurring concentrations that are perceived as impacted. The USGS in 1984 (Ref. 70) completed a study that evaluated the naturally occurring metal concentrations

across the United States. Maps were produced that depicted naturally occurring metal concentration ranges for various regions. The naturally occurring range for metals in the Wilmington area are listed in the Expanded Site Inspection (Ref. 2, p. 50) and in Table 2-3 of this report. It is suggested that these USGS naturally occurring concentration ranges or a control chart be used to evaluate naturally occurring background concentration for inorganics at the site.

"Protection of groundwater" soil remediation goals require further remediation of soil when the constituents in the soil can leach contaminants in excess of groundwater remediation goals. NCDENR recommends the use of TCLP analysis to determine the leachability of contaminants. Alternatively the use of simple scientifically valid mathematical equations, employing site-specific field data for all parameters to calculate protection of groundwater goals can be used. If TCLP analysis or site-specific mathematical equations have not been employed, the "protection of groundwater" soil remediation goals can be set at a value of twenty times the corresponding groundwater remediation goal.

TCLP analysis was completed in 1991 for soil in the former drip pad area, CCA area, and tank area for arsenic, chromium, lead, mercury, benzene, methyl ethyl ketone, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, cresol (ortho), cresol m&p, hexachlorobenzene, pentachlorophenol, pyridine, and total cresol (Table 2-6). All of the constituents were non-detected in the leachate, except chromium from the drip pad and CCA areas. Chromium leached above the groundwater remediation goal for the site. The concentration of constituents in the soil prior to TCLP analysis was not determined. As a result, acceptable concentrations for the constituents that would not leach to the groundwater in excess of the groundwater goal could not be back calculated.

Since no TCLP data or site-specific mathematical equations have been completed for the site a "protection of groundwater" soil goal that is twenty times the groundwater remediation goal is used for delineation in this report. The "protection of groundwater" soil goals are much more stringent than the health-based soil remediation goals. The preliminary soil remediation goals for the site are listed on the surface soil delineation map (Figure 17).

Preliminary soil remediation goals have been exceeded in the surface soil in the treated wood storage areas, non-treated wood storage areas, landfarm area, production area, covered ditch and adjacent to Greenfield Creek. Metal concentrations appear to be naturally occurring, except in the drip track area in front of the former CCA treatment area.

32.2 Subsurface Soil Contaminant Delineation

The subsurface soil (greater than 2 feet) contaminant delineation map is presented in Figure 18. The depth to groundwater at the site ranges from the land surface to an approximate depth of 3 feet below land surface adjacent to Greenfield Creek. The depth to groundwater varies +/- 1 foot daily depending upon tidal stage. Because the depth to groundwater is shallow at the site, no soil cross-sections have been prepared.

The preliminary soil remediation goals for surface soil were used for contaminant delineation of the subsurface soils. It is expected that the final health-based subsurface remediation goals will be less stringent than the final surface soil remediation goals since the contaminants are at depth,

decreasing the risk for contact. The final "protection of groundwater" subsurface soil remediation goals will likely be the same as the surface soil since infiltrated water can leach constituents in the subsurface soil to the groundwater.

Preliminary soil remediation goals have been exceeded in the subsurface soil in the treated wood storage areas, non-treated wood storage areas, landfarm area, production area, covered ditch and adjacent to Greenfield Creek. Metal concentrations appear to be naturally occurring, except in the drip track in front of the former CCA treatment area.

32.3 Sediment Contaminant Delineation

Sediment samples have been collected from the on site drainage ditch, Greenfield Creek, and the Cape Fear River (Ref. 2, Ref. 28, and Ref. 71). No remediation standards exist for sediments in North Carolina. In lieu of applicable standards, the procedures for establishing preliminary and final sediment remediation goals listed in Appendix D of RECIG (Ref. 74) were used for this report. Preliminary sediment remediation goals were used to produce a sediment contaminant delineation map for this report (Figure 19).

The preliminary sediment remediation goals are for unrestricted site use. Restricted use sediment remediation goals should pertain to the site and both banks of the drainage ditch and Greenfield Creek. The NCSPA owns the property on both sides of the drainage ditch and Greenfield Creek, except for a small area at the confluence of the drainage ditch and Greenfield Creek. Restricted site use sediment remediation goals may also apply in the Cape Fear River from the bank to the US Harbor Line within the property boundaries of the site. Because contaminated sediments are located in a wetland and site use is restricted, final sediment remediation goals must be requested from NCDENR.

Unrestricted preliminary sediment remediation goals are the most stringent of: 1) the health-based soil remediation goals or the upstream "background" concentrations, if less stringent; and 2) remediation goals sufficient to ensure that contaminated sediment will not cause exceedance of the remediation goals for groundwater and surface water. Since the net discharge of groundwater is to the surrounding surface water bodies and constituents are not present in the surface water adjacent to the site, the health-based soil remediation goals or the upstream background concentrations (whichever is less stringent) are used for preliminary sediment remediation goals in this report.

Due to tidal influences, the potential for upstream transport of constituents, and the presence of other active and former industrial sites in the area, careful consideration must be given to background sediment sample locations. The background Cape Fear River sediment sample (SS14) is located 3,800 feet upstream of the site. This sample should be satisfactory as a background location. The drainage ditch background sediment sample (SD01) is located on the north side of Greenfield Street near the entrance to the site. This drainage ditch parallels and is isolated from the on site drainage ditch. Only stormwater runoff and groundwater infiltrate this drainage ditch. The Greenfield Creek background sediment sample was collected (BK-S1) from the bed of the overflow stream from Greenfield Lake. This sample location should also be satisfactory as a background sediment sample location.

Preliminary sediment remediation goals have been exceeded along the length of the on site drainage ditch and Greenfield Creek. Sediment remediation goals have also been exceeded along the bank of the southern slip in the Cape Fear River. The constituents that exceed the preliminary sediment remediation goals include benzo(a)anthracene, benzo(a)pyrene, dibenzo(a,h)anthracene, benzo(b)fluoranthene, and carbazole.

The surface water pathway (sediments) is the primary human health and environmental concern at the site. Sediments in the drainage ditch and Greenfield Creek contain creosote compounds. There is possible creosote contamination in river sediment at the site waterfront and at the mouth of Greenfield Creek.

Two drainage pathways exist at the site: 1) the on site drainage ditch to Greenfield Creek, and 2) runoff to, or flooding by the Cape Fear River.

Detected metals appear to be natural occurring concentrations, except for copper at SD05. This copper concentration at this location could be an anomaly. This sample location is located in the upstream reaches of the drainage ditch in the vicinity of the non-treated wood storage area. Soil samples collected on all sides of this sediment samples do not indicate elevated levels of copper in the area (Figure 12).

32.4 Surface Water Contaminant Delineation

Surface water samples have been collected from the drainage ditch, Greenfield Creek, and the Cape Fear River (Figure 16).

Surface water classifications in North Carolina are divided between freshwater and tidal saltwater. Surface water bodies adjacent to the site have been classified as tidal saltwater by NCDENR (Ref. 32). Greenfield Creek and the on-site tributaries are classified as Class SC-Swamp. The Cape Fear River is classified as Class SC tidal saltwater. Class SC waters are designated as waters suitable for aquatic life propagation and maintenance of biological integrity, wildlife, secondary recreation, and any other usage except primary recreation or shellfishing for market purposes.

For surface water delineation (Figure 20), State tidal saltwater standards published in NCAC Title 15A, Subchapter 2B for Class SC surface water (Ref. 31) was used for this report. In addition to the listed tidal salt water standards, any source of water pollution which precludes use of Class SC waters, including their functioning as primary nursery areas (PNAs), on either a short-term or a long-term basis for which the water is classified, is considered a violation of surface water quality standards. When surface water standards are below the method detection limit, the method detection limit becomes the standard. A written request must be submitted to NCDENR for final surface water remediation goals.

All of the surface water samples have historically been below laboratory detection limits except for toluene, arsenic, and copper. The toluene detection occurred in the background surface water sample SW01 near the entrance to the site. Arsenic was detected in the on site drainage ditch.

Copper was detected in the on site drainage ditch, Greenfield Creek, and the Cape Fear River. The background surface water sample also detected copper at 0.020 mg/l. All detected constituents are below the Class SC surface water standards.

32.5 Groundwater Contaminant Delineation

Delineation of the horizontal and vertical extent of groundwater contamination is evaluated in this report using the most current groundwater data collected during the week of February 23, 1998. All previously collected groundwater sampling data is indicated on summary Tables 4 through 6. All detected constituents that exceed the groundwater remediation goal are shown as "grayed" concentrations in the summary tables.

Groundwater remediation goals are the least stringent of: 1) the health-based remediation goals for groundwater listed in Table D-2 of RECIG (Ref. 74); 2) the method detection limits; or 3) natural background levels (metals only). For constituents not listed in Table D-2, a health-based goal must be calculated and proposed for approval by NCDENR, Division of Water Quality (DWQ). Health-based remediation goals need to be calculated for carbazole, dibenzofuran, and m&p cresol. For delineation purposes, these constituents were screened using the USEPA Region III risk-based concentration (RBC) table (Ref. 75). If the RBC is based on non-carcinogenicity, it was adjusted by multiplying by 0.1 (Ref. 74, p. E-4). No adjustment was necessary if the RBC is based on carcinogenicity. If a contaminant exceeds the RBC screening concentration, an interim maximum allowable concentration (IMAC) must be submitted and approved by NCDENR DWQ.

Health-based groundwater remediation goals for detected constituents are presented in tabular form on each groundwater contaminant delineation map and cross-section. The lateral extent of groundwater contamination is shown for the shallow aquifer on Figure 21, the intermediate aquifer on Figure 22, and the deep aquifer on Figure 23. The vertical extent of groundwater contamination is shown on cross-sections A - A' and B - B' on Figure 24.

Four groundwater plumes are present in the shallow aquifer (Figure 21). On site plumes are shown originating from sources at the landfarm, the large storage tank area, and the former wood treatment area. The former wood treatment area includes the CCA, PCP, and creosote treatment areas and the covered ditch. Constituents from the former wood treatment area appear to have migrated to the drainage ditch and Greenfield Creek. An off-site plume is located adjacent to the former City of Wilmington wastewater treatment facility. Raw sewage was discharged to the Cape Fear River through a shallow 24-inch diameter pipe in this location..

The landfarm plume is inorganic (arsenic and chromium). The lateral extent is defined side-gradient and upgradient of the landfarm (Figure 21). The downgradient extent has not been confirmed but is likely defined by the drainage ditch that separates the site from Amerada Hess. The vertical extent is limited to the shallow aquifer (Figure 24).

The large storage tank plume is small and indicated by residual product in the vicinity of MW-22 (Figure 21). The lateral extent is defined in all directions. The Cape River intersects the

downgradient extent of the plume. The vertical extent is defined with the plume being contained in the shallow aquifer at the site (Figure 24).

The wood treatment area plume is the largest plume on site. The lateral extent of the wood treatment plume is defined upgradient, sidegradient to the west, and downgradient in the central portion of the site for the shallow and intermediate aquifers (Figure 21 and 22). The downgradient and sidegradient extent of the wood treatment area plume has not been defined along the southern portion of the drainage ditch and along Greenfield Creek both on and off site. The vertical extent of the wood treatment plume has not been defined in the deep aquifer in the central portion of the site and along Greenfield Creek (Figure 24).

The off-site plume in the vicinity of the City of Wilmington pump station has not been defined laterally (Figure 21). The vertical extent appears to be limited to the shallow aquifer (Figure 24). This plume is most likely not attributable to the site.

Creosote is a dense non-aqueous phase liquid (DNAPL). As a whole, the constituents that make up creosote are slightly heavier than water, have a high viscosity, and low dissolved phase mobility. Because wood-preserving constituents are heavier than water and have a viscosity greater than water, gravity and interfacial tension between the DNAPL and groundwater play an important role in the migration of the DNAPL. The DNAPL will continue to migrate vertically downward in the subsurface until it intercepts a barrier to its vertical migration. The barrier to migration can be a fine-grained layer (peat) or clay or any material in which the pore spaces are smaller than that of the host material. If the barrier is flat lying, the DNAPL will begin to pool and spread laterally on this barrier until a critical pool height is reached. The critical pool height is the height of the DNAPL pool required to exceed the entry pressure (capillary pore pressure and interfacial tension) within the pores of the material restricting the movement of the DNAPL. Once this critical pool height is reached, the DNAPL will then begin to flow through the original barrier to flow. Once the entrance pressure is achieved and flow through the barrier has begun, the reduced interfacial tension can allow the entire free product pool to drain leaving only residual DNAPL behind. If the barrier encountered is sloping, the DNAPL will most likely flow by gravity downslope until another barrier to flow is encountered causing the DNAPL to pool. This can continue until the required entry pressure cannot be met or until the separate phase fluid volume is reduced to residual concentrations.

As the DNAPL is migrating through porous media, residual DNAPL is left behind the trailing edge of the moving DNAPL body due to snap-off and by-passing mechanisms. It can be expected that an estimated 20 percent of the DNAPL body will be left behind as residual during free-phase migration. After a certain distance of migration, the free phase will be reduced to just residual concentrations.

Wood-preserving constituents entered the subsurface at the former wood treatment area and along the covered ditch. In the subsurface, free-phase wood-preserving constituents migrated toward the top of the peat near MW-11 and MW-14. Free-phase constituents also migrated in the upper sand to the northwest toward MW-12, to the southwest toward MW-19 and MW-24R, and to the east toward MW-26. The free-phase constituents migrated into the peat at MW-11 and MW-14 and pooled in the vicinity of MW-26 adjacent to the drainage ditch. Free-phase

constituents have been detected in the lower sand at MW-11B. It appears that the migration of free-phase wood-preserving constituents has reached residual concentrations near MW-12, MW-19, and MW-24R and has pooled beneath the covered ditch. Free-phase measurements indicate that residual concentrations are present in the shallow aquifer near MW-11 at 0.01 feet and as free product in MW-14 at 1.91 feet and MW-26 at 4.1 feet. A small amount of free product (0.23 feet) as accumulated in the intermediate aquifer at MW-11B.

Free-phase wood-preserving constituents also entered the subsurface near the former large storage tank area. Once in the subsurface, the free-phase constituents migrated to the west toward the Cape Fear River. It appears that these constituents did not pool on top of the peat as indicated by residual concentrations of 0.1 feet at MW-22.

33.0 SPECIAL ASSESSMENTS

No special assessments have been conducted at the site.

34.0 FIELD LOGS, NOTES, AND PHOTOGRAPHS

All available field logs, notes, and photographs are included in referenced documents attached to this report.

35.0 CERTIFICATION

Certification for this report is provided in Section 23 of this report.

36.0 REFERENCES

1. U.S. Geological Survey, 7.5 minute series Orthophotomap (topographic) Map of North Carolina: Wilmington, NC, 1970, photorevised 1979, Scale 1:24,000.

2. Black & Veatch, July 1997, Expanded Site Inspection of Southern Wood Piedmont, Wilmington, New Hanover County, North Carolina.

3. Parker, S.F., July 15, 1994, NCDEHNR, Superfund Section, Latitude and Longitude Worksheet Calculations as per CERCLA, EPA Pub 9345.01A, July 15, 1994.

4. Parker, S.F., January 1995, NCDEHNR, Superfund Section, Site Inspection Prioritization, Southern Wood Piedmont Company, NCD 058 517 467, Wilmington, New Hanover County, North Carolina, Reference No. 02821.

5. Division of Facility Services, September 30, 1992, Child Day Care Section, Monthly Listings of Day Care Centers and Day Care Homes.

6. Burdell, C., June 8, 1984, Technical Services Director, Southern Wood Piedmont Co., Letter to William Paige, NCDHR, Solid and Hazardous Waste Management, Re: Proposed Cleanup Program for Southern Wood Piedmont Wilmington, NC Plant site.

7. Church, R.L., November 25, 1981, District Sanitarian, RCRA Interim Status Inspection.

8. Moore, F.E., August 10, 1984, NCDHS EHS, Solid and Hazardous Waste Management, Transmittal letter to Mr. Walton Jones, USEPA Region IV, Re: Preliminary Assessment Reports for the Southern Wood Piedmont site.

9. NCDHR, May 20, 1985, Department of Health Services, Administrative Order on Consent, Southern Wood Piedmont Company, Wilmington, North Carolina site, EPA ID: NCDO58517467.

10. Burdell, C., September 21, 1984, Technical Services Director, Southern Wood Piedmont Co., Letter to William Paige, NCDHR SHWM, Re: Response to September 7, 1984 Letter Concerning Proposed Landfarming and Administrative Order on Consent.

11. Parker, S.F., September 30, 1994, Telephone memorandum with Chuck Davis of Southern Wood Piedmont Company, Re: Areas and depths of excavations and filling at the site.

12. Davis, T.M., January 3, 1994, Environmental Affairs Manager, Southern Wood Piedmont Company, Completion Letter, Administrative Order # NCD 058517467, Wilmington, NC.

13. Paige, W., July 6, 1984, Environmental Engineer, NCDHR DHS, Letter to Charles Burdell, Southern Wood Piedmont, Re: June 8th 1984 Remedial Action Proposal Response.

14. Burdell, C., July 31, 1984, Technical Services Director, Southern Wood Piedmont Co., Letter to William Paige, NCDHR SHWM, Re: Response to July 6th 1984 Remedial Action Response Letter.

15. ViroGroup, Inc., 1994, Phase III Groundwater Quality Assessment Report, Southern Wood Piedmont Company, Wilmington, North Carolina Facility.

16. Geraghty & Miller, Inc., September 1993, Data Summary for the 1990 Landfarm Area Sampling, Southern Wood Piedmont, Wilmington, North Carolina.

17. Latham, D.E., November 27, 1985, Assistant Environmental Manager, Southern Wood Piedmont Company, Letter to Doug Holyfield, NC Division of Solid Waste Management, Re: Areas of Arsenic Contaminated Soil Removal.

18. Parker, S.F., December 20, 1994, Memorandum, Source Area Dimensions, Southern Wood Piedmont Company, Wilmington.

19. U.S. Department of Agriculture, April 1997, Soil Conservation Service, Soil Survey of New Hanover County, North Carolina.

20. U.S. Department of Commerce, June 1968, Reprint: 1983, Climatic Atlas of the United States, Washington, D.C.: GPO, National Oceanic and Atmospheric Administration.

21. North Carolina Atlas: Portrait of a Changing State, 1975, University of North Carolina Press, Chapel Hill, NC.

22. U.S. Department of Commerce, 1961, Rainfall Frequency Atlas of the United States, Technical Paper Number 40, Washington, D.C.: GPO.

23. Bain, G.L., 1970, Geologist, USGS, Geology and Ground-Water Resources of New Hanover County, North Carolina, Ground-Water Bulletin Number 17, Raleigh, North Carolina.

24. Robison, T.M., and Mann, L.T., Jr., 1997, USGS, Public Water Supplies of North Carolina, Part 5, Southern Coastal Plain, Raleigh, North Carolina.

25. North Carolina Geologic Survey, 1985, Geologic Map of North Carolina, Raleigh, North Carolina.

26. Sohl, N.F., and Owens, J.P., 1991, Cretaceous Stratigraphy of the Carolina Coastal Plain, in Horton, J.W., and Zullo, V.A., The Geology of the Carolinas, Univ. of Tennessee Press, Knoxville.

27. Law Environmental, Inc., November 27, 1985, Monitoring Well Installation and Hydrogeologic Report, Wilmington, North Carolina Plant.

28. ViroGroup, Inc., February 26, 1993, ETE Division, Phase II Groundwater Quality Assessment Wilmington, North Carolina Facility, Southern Wood Piedmont Company.

29. Parker, S.F., October 6, 1994, Memorandum, Re: Southern Wood Piedmont Co., Wilmington, NCD 058 517 467, Surface Water Pathway Definition.

30. NCDEHNR, November 8, 1993, NCAC Title 15A Subchapter 2L Sections .0100, .0200, and 0.300, Classifications and Water Quality Standards Applicable to the Groundwaters of North Carolina, with amendments through 10/25/94.

31. NCDEHNR, February 1, 1993, NCAC Title 15A Subchapter 2B Section .0200, Classifications and Water Quality Standards Applicable to Surface Waters of North Carolina.

32. NCDEHNR, February 1, 1993, Classifications and Water Quality Standards Assigned to the Waters of the Cape Fear River Basin.

33. Giese, G.L., Wilder, H.B., and Parker, G.G., Jr., 1985, Hydrology of Major Estuaries and Sounds of North Carolina, US Geological Survey Water Supply Paper 2221.

34. Thomas, Scotti, BVWST, Telephone Conversation with Rufus Allen, U.S. Geological Survey, April 23, 1993, Cape Fear River Gauging Stations and Tidal Influences.

35. FEMA, April 2, 1986, National Flood Insurance Program, Flood Insurance Rate Map, City of Wilmington, New Hanover County, North Carolina, (Unincorporated Areas), Community-Panel Number: 370171 0010B (Panel 10 of 10).

36. Reliford, K., May 5, 1995, BVWST, Telephone Conversation with Dan Emerson, U.S. Army Corp of Engineers, Re: Flow rate for the Cape Fear River.

37. Mangum, R., June 11, 1997, BVSPC, Wetlands Acreage Estimate Calculations, 1997.

38. Parker, S.F., October 6, 1994, NCDEHNR, Superfund Section, Memorandum to File: Wetland Delineation.

National Wetlands Inventory 7.5 Minute Quadrangles: Wilmington, NC; Castle Hayne, NC; Leland, NC; Winnabow, NC; Carolina Beach, NC; Rocky Point, NC.

39. ChemRisk, May 29, 1996, Division of McLaren/Hart, Human Health and Ecological Risk Assessment for the Southern Wood Piedmont Site, Wilmington, North Carolina.

40. Parker, S.F., December 12, 1994, NCDEHNR, Superfund Section, Memorandum, Southern Wood Piedmont Co., NCD 058 517 467, Re: Municipal Drinking Water Supplies within the Wilmington Area.

41. Mosian, P., May 20, 1997, BVSPC, Telephone Conversation with Ms. Leslie Royals, Engineering Technician, New Hanover County Engineering Department, Re: Groundwater-use Information for the Runnymeade Subdivision.

42. Moore, M., July 28, 1994, NCDENR, Division of Environmental Health, Public Water Supply Database.

43. North Carolina Division of Health Services, May 16, 1990, Water Supply Branch, Environmental Health Section, Public Water Supply Database, Inventory Document Number PWSI.410.

44. Stanley, J., January 10, 1994, NCDEHNR, Superfund Section, Interoffice Memorandum: Update on Status of Well Head Protection Programs in North Carolina.

45. Giles, S.R., May 28, 1997, NCDEHNR, Paul Moisan letter, BVSPC, Re: Rare Species, High Quality Natural Communities, Critical Habitats, and Significant Natural Areas near Southern Wood Piedmont in Wilmington, New Hanover County, North Carolina.

46. Parker, S.F., December 3, 1994, NCDEHNR, Superfund Section, Review of Natural Heritage Program Maps and File Information.

47. U.S. Fish and Wildlife, January 1992, Southeastern Region, Endangered and Threatened Species of the Southeastern United States (The Red Book), Volume I.

48. Reliford, K., May 5, 1995, Telephone Memorandum, Re: Commercial Fisheries on the Cape Fear River.

49. Reliford, K., May 5, 1995, BVWST, Telephone Conversation with Fred Harris, North Carolina Department of Fish and Game, Division of Marine Fisheries, Re: Recreational Fishing and Boating on the Cape Fear River.

50. Parker, S.F., January 25, 1995, NCDEHNR, Superfund Section, Memorandum to File: Fisheries in the Study Area.

51. Dunn, G.H., September 2, 1993, Poyner & Sprull, T.M. Davis letter, Re: Southern Wood Piedmont Company, Wilmington, NC, History of Property Use.

52. Dunn, G.H., November 3, 1993, Poyner & Sprull, T.M. Davis letter, Re: Southern Wood Piedmont Company, Wilmington Facility Site, Ownership History.

53. Morgan, J., March 10, 1976, Environmental Technician, Southern Wood Piedmont, Letter to Mr. C.H. Winefordner, Chief - Permits Division, Re: Permit No. SAWKS 75-

65-23-659 for Construction of Backfilled Bulkhead, Earthen Dike, Filling of Existing Ditch, and Excavation of Drainage Ditch.

54. Morgan, J., March 9, 1976, Environmental Technician, Southern Wood Piedmont, Letter to Mr. Gerald Kraynak, Regional Engineer, Wilmington District, NCDNRER, Re: Permit No. 28-76 corrected, Erosion Control Plan.

55. Morgan, J., March 10, 1976, Environmental Technician, Southern Wood Piedmont, Letter to Mr. John R. Parker, Jr., Permit Coordinator, Div. of Marine Fisheries, NCDNRER, Re: Permit No. 28-76 to Excavate or Fill.

56. Helms, R.F., October 30, 1981, Director, NCDNRCD DEM, Letter to Mr. Joe Morgan, Environmental Manager, Southern Wood Piedmont, Re: NPDES Permit No. NC0000761.

57. Wakild, C., September 15, 1980, Regional Supervisor, NCDNRCD DEM, Letter to Mr. Joe Morgan, Environmental Manager, Southern Wood Piedmont, Re: Air Pollution Permit No. 2704R3.

58. Counsil, C.A., June 5, 1981, Vice President, Chief Operating Officer, Southern Wood Piedmont Company, Notification of Hazardous Waste Site.

59. Holyfield, D., March 17, 1994, NCDEHNR, Letter to T.M. Davis, Environmental Affairs Manager, Southern Wood Piedmont, Re: Review of Risk Assessment Report.

60. Williams, L.K., February 17, 1994, Toxicologist, NC Environmental Epidemiology Section, Memorandum to Doug Holyfield, NC Waste Management Branch, Re: Review of Risk Assessment Report.

61. Soil and Material Engineers, Inc., 1982, Geotechnical Investigation Report, City of Wilmington Property leased by Southern Wood Piedmont Company, Wilmington, North Carolina.

62. Shiver, Rick, September 27, 1990, NCDEHNR DEM GS, Pollution Incident/UST Leak Reporting Form.

63. Church, R., August 2, 1982, NCDHS EHS, Transmittal Letter to Ed Gibbs, Environmental Manager, Southern Wood Piedmont Company, and attached DHS Laboratory Report, May 21, 1982.

64. Gibbs, E., August 20, 1982, Environmental Manager, Southern Wood Piedmont Co, Transmittal Letter to Ray Church, NCDHS EHS, and attached Technical Services Inc., Laboratory Report, August 5, 1982.

65. NUS Corporation, April 18, 1986, Superfund Division, Site Screening Investigation Report for the Southern Wood Piedmont Company Facility located in Wilmington, North Carolina.

66. Environmental Technology Engineering, Inc., (ETE), August 3, 1992, Southern Wood Piedmont Company, Groundwater Quality Assessment, Wilmington, North Carolina Facility.

67. Geraghty & Miller, Inc., December 1993, Risk Assessment Report for Landfarm Areas, Southern Wood Piedmont, Wilmington, North Carolina.

68. Geraghty & Miller, Inc., September 1993, Data Summary Report for the 1991 Landfarm Area Sampling and Comparison of 1990 and 1991 Soil and Ground-Water Data, Southern Wood Piedmont Company, Wilmington, North Carolina.

69. Geraghty & Miller, Inc., December 9, 1993, Data Summary Report for the Treated and Non-Treated Wood Storage Areas Soil Investigation, Southern Wood Piedmont Company, Wilmington, North Carolina.

70. Shacklette, H.T., and Boerngen, J.G., 1984, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S. Geological Survey Professional Paper 1270.

71. ViroGroup, Inc., May 1996, Soil, Sediment, and Surface Water Assessment Report, Southern Wood Piedmont Company, City of Wilmington and North Carolina State Ports Authority, Wilmington, North Carolina Facility.

72. Savannah Laboratories and Environmental Services, 1998, Corporate Quality Assurance Plan.

73. Black & Veatch, April 1996, Final Field Study Plan for Expanded Site Inspection, Southern Wood Piedmont Company, Wilmington, New Hanover County, North Carolina.

74. NCDENR, June 1988, Registered Environmental Consultant Program, 15A NCAC 13C .0300 Implementation Guidance.

75. Smith, R.L., EPA Region III Risk-Based Concentration Table

TABLE 1-1

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
NCDHR-1	1982	Soil	10' from Treatment Vessel	Surface	Grab	To determine presence or absence of contamination	NC Dept. of Human Resources	Semi-Volatiles	unknown
NCDHR-3	1982	Soil	125' from Treatment Vessel	Surface	Grab	To determine presence or absence of contamination	NC Dept. of Human Resources		
SWP-1	1982	Soil	10' from Treatment Vessel	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
SWP-3	1982	Soil	125' from Treatment Vessel	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
Area A	1983	Soil	Treating Area	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont	Semi-Volatiles Arsenic Chromium Copper	unknown unknown unknown unknown
Area B	1983	Soil	CCA Area	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
Area C	1983	Soil	Creo-Penta Track Area	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
Area D	1983	Soil	Old Ditch Area	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
Area E	1983	Soil	Bulk Storage Area (Creosote Storage Area Only)	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
Area F	1983	Soil	Banding House Area	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
Area G	1983	Soil	Product Storage Area	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont		
JA-C1	1985	Soil	Composite from Jetty Area	Surface	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation	Semi-Volatiles Volatiles Inorganics	unknown unknown unknown
LA-C2	1985	Soil	Composite from Landfarm Area A	Surface	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
LB-C3	1985	Soil	Composite from Landfarm Area B	Surface	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
LC-C4	1985	Soil	Composite from Landfarm Area C	Surface	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
LF1AU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N Total Nitrogen Total Phosphorous Total Organic Carbon Chloride	8270 351.2 353.1 unknown 365.1 415.1 325.2
LF1BU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1CU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1DU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1EU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2AU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2BU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2CU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2DU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2EU	1990	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
LF1AM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N Total Nitrogen Total Phosphorous Total Organic Carbon Chloride	8270 351.2 353.1 unknown 365.1 415.1 325.2
LF1BM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1CM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1DM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1EM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2AM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2BM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2CM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2DM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2EM	1990	Soil	Landfarm	Midway through Landfarm Material	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1AL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N Total Nitrogen Total Phosphorous Total Organic Carbon Chloride	8270 351.2 353.1 unknown 365.1 415..1 325.2
LF1BL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1CL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1DL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1EL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2AL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2BL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2CL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2DL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2EL	1990	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1AS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N Total Nitrogen Total Phosphorous Total Organic Carbon Chloride	8270 351.2 353.1 unknown 365.1 415.1 325.2
LF1BS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1CS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1DS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1ES	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2AS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2BS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2CS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2DS	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2ES	1990	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
LF1A	1990 1996	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Dioxins & Furans	8290
LF2A	1990 1996	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1AUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Arsenic Chromium Copper Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N Total Nitrogen Total Phosphorous Total Organic Carbon Chloride	8270 7060 6010 6010 351.2 353.1 unknown 365.1 415.1 325.2
LF1BUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1CUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1DUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1EUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2AUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2BUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2CUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2DUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2EUS	1991	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1ALS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Arsenic Chromium Copper Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N Total Nitrogen Total Phosphorous Total Organic Carbon Chloride	8270 7060 6010 6010 351.2 353.1 unknown 365.1 415.1 325.2
LF1BLS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1CLS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1DLS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1ELS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2ALS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2BLS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2CLS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2DLS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF2ELS	1991	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
LF1A	1996	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Semi-Volatiles Arsenic Chromium Copper Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N Total Nitrogen Total Phosphorous Total Organic Carbon Chloride	8270 6010 6010 6010 3-202 EPACE3-283 unknown 365.4 (415.1) 9060 9251
LF1B	1996	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
LF1C	1996	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
LF2A	1996	Soil	Landfarm	0" - 3" Below Top of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
LF2B	1996	Soil	Landfarm	6" Above Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
LF2C	1996	Soil	Landfarm	6" Below Base of Landfarm	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
NTA1	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Arsenic Chromium Copper	8270 7060 6010 6010
NTA2	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTA3	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTA4	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTA5	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTA6	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTA7	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTA8	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTA9	1991	Soil	Non-Treated Wood Storage Area A (NTA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB1	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Arsenic Chromium Copper	8270 7060 6010 6010
NTB2	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB3	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB4	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB5	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB6	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB7	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB8	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB9	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB10	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB11	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB12	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB13	1991	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
NTB3	1996	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	TOC Analysis	ViroGroup	TOC Analysis	415.1
NTB4	1996	Soil	Non-Treated Wood Storage Area B (NTB)	0" - 6"	Stainless Steel Hand Auger	TOC Analysis	ViroGroup		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
TWS1A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles	8270
TWS2A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Arsenic	7060
TWS3A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Chromium	6010
TWS4A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Copper	6010
TWS5A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	TOC Analysis	415.1
TWS6A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS7A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS8A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS9A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS10A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS11A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS12A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS13A	1991	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS10	1996	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	TOC Analysis	ViroGroup		
TWS14	1996	Soil	Treated Wood Storage Area A (TWSA)	0" - 6"	Stainless Steel Hand Auger	TOC Analysis	ViroGroup		
#1	1993	Soil	Road in front of old #5 Pole machine	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont	Semi-Volatiles	8270
#2	1993	Soil	Road in front of old #5 Pole machine	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont	Volatiles	8010/8020
#3	1993	Soil	Road crossing separating State Ports & City	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont	Antimony, Beryllium, Cadmium, Chromium	6010
#4	1993	Soil	Road crossing separating State Ports & City	Surface	Grab	To determine presence or absence of contamination	Southern Wood Piedmont	Copper, Nickel, Zinc	6010
TWSB1A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Arsenic, Lead	760, 7421
TWSB2A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Selenium, Thallium	7740, 7841
TWSB3A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Pesticides	8080
TWSB4A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Semi-Volatiles	8270
TWSB5A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Volatiles	8240
TWSB6A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Arsenic	7060
TWSB7A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Chromium	6010
TWSB8A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Copper	6010
TWSB9A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB10A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB11A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
TWSB12A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB13A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB14A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB15A	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB15ADUP	1996	Soil	Treated Wood Storage Area B (TWSB)	0" - 6"	Stainless Steel Hand Auger	QAQC	ViroGroup		
PDA1A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Semi-Volatiles Volatiles Arsenic Chromium Copper	8270 8240 7060 6010 6010
PDA2A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA3A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA4A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA5A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA6A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA7A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA8A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA9A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA10A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA11A	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA12C	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	TOC Analysis	ViroGroup		
PDA13C	1996	Soil	Production Area	0" - 6"	Stainless Steel Hand Auger	TOC Analysis	ViroGroup		
SS-01	1996	Soil	North of Landfarm 1 and Landfarm 2	< 2'	Stainless Steel Spoon	To establish background levels	Black & Veatch	Semi-Volatiles Volatiles Inorganics Pesticides PCBs Dioxins and Furans	Unknown Unknown Unknown Unknown Unknown Unknown
SS-02	1996	Soil	Northeast of site	< 2'	Stainless Steel Spoon	To establish background levels	Black & Veatch		
SS-03	1996	Soil	Southeast of site	< 2'	Stainless Steel Spoon	To establish background levels	Black & Veatch		
SS-04	1996	Soil	Non-Treated Wood Storage Area A (NTA)	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-05	1996	Soil	Non-Treated Wood Storage Area B (NTB)	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-06	1996	Soil	CCA & Creosote Treatment Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-07	1996	Soil	CCA & Creosote Treatment Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-08	1996	Soil	CCA & Creosote Treatment Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-09	1996	Soil	Treated Wood Storage Area A (TWSA)	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-10	1996	Soil	Treated Wood Storage Area B (TWSB)	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-11	1996	Soil	Large Storage Tank Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-12	1996	Soil	West of road near center of site	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
SS-13	1996	Soil	Covered Ditch Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-14	1996	Soil	Landfarm 1 & Landfarm 2	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-15	1996	Soil	Covered Ditch Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-16	1996	Soil	Southwest corner of site	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-17	1996	Soil	Between Greenfield Creek and the earthen berm	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-18	1996	Soil	South central portion of the site	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-19	1996	Soil	South of Treated Wood Storage Area A (TWSA)	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-20	1996	Soil	West of Track Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
SS-21	1996	Soil	Track Area	< 2'	Stainless Steel Spoon	To confirm presence or absence of contamination	Black & Veatch		
BG-1	1991	TCLP	Inside CCA Building	0" - 6"	Grab	To determine leachability		Semi-Volatiles Volatiles Arsenic Chromium Lead Mercury	1311 1311 1311 1311 1311 1311
DP-1	1991	TCLP	Drip Pad Area	0" - 6"	Grab	To determine leachability			
TP-1	1991	TCLP	Former Tank Pad Aea	0" - 6"	Grab	To determine leachability			
NCDHR-2	1982	Subsurface Soil	10' from Treatment Vessel	14"	Unknown	To confirm presence or absence of contamination	NC Dept. of Human Resources	Semi-Volatiles	unknown
NCDHR-4	1982	Subsurface Soil	125' from Treatment Vessel	14"	Unknown	To confirm presence or absence of contamination	NC Dept. of Human Resources		
SWP-2	1982	Subsurface Soil	10' from Treatment Vessel	14"	Unknown	To confirm presence or absence of contamination	Southern Wood Piedmont		
SWP-4	1982	Subsurface Soil	125' from Treatment Vessel	14"	Unknown	To confirm presence or absence of contamination	Southern Wood Piedmont		
TWS1B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller	Semi-Volatiles Arsenic Chromium Copper	8270 7060 6010 6010
TWS2B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS3B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS4B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS5B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS6B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS7B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS8B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS9B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS10B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS11B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS12B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		
TWS13B	1991	Subsurface Soil	Treated Wood Storage Area A (TWSA)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	Geraghty & Miller		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
TWSB1B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Semi-Volatiles	8270
TWSB2B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Volatiles	8240
TWSB3B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Arsenic	7060
TWSB4B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Chromium	6010
TWSB5B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Copper	6010
TWSB6B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB7B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB8B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB9B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB10B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB11B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB12B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB13B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB14B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
TWSB15B	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA1B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Semi-Volatiles	8270
PDA2B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Volatiles	8240
PDA3B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Arsenic	7060
PDA4B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Chromium	6010
PDA5B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	Copper	6010
PDA6B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup	TOC Analysis	415.1
PDA7B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA8B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA9B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA10B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		
PDA11B	1996	Subsurface Soil	Production Area	12" - 18"	Stainless Steel Hand Auger	To determine presence or absence of contamination	ViroGroup		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
SB-01	1996	Subsurface Soil	North of Landfarm 1 and Landfarm 2	> 2'	Stainless Steel Split Spoon or Hand Auger	To establish background levels	Black & Veatch	Semi-Volatiles Volatiles Inorganics Pesticides PCBs	Unknown Unknown Unknown Unknown Unknown
SB-02	1996	Subsurface Soil	Northeast of site	> 2'	Stainless Steel Split Spoon or Hand Auger	To establish background levels	Black & Veatch		
SB-03	1996	Subsurface Soil	Southeast of site	> 2'	Stainless Steel Split Spoon or Hand Auger	To establish background levels	Black & Veatch		
SB-04	1996	Subsurface Soil	Non-Treated Wood Storage Area A (NTA)	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-05	1996	Subsurface Soil	Non-Treated Wood Storage Area B (NTB)	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-06	1996	Subsurface Soil	CCA & Creosote Treatment Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-07	1996	Subsurface Soil	CCA & Creosote Treatment Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-08	1996	Subsurface Soil	CCA & Creosote Treatment Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-09	1996	Subsurface Soil	Treated Wood Storage Area A (TWSA)	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-10	1996	Subsurface Soil	Treated Wood Storage Area B (TWSB)	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-11	1996	Subsurface Soil	Large Storage Tank Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-12	1996	Subsurface Soil	West of road near center of site	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-13	1996	Subsurface Soil	Covered Ditch Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-14	1996	Subsurface Soil	Landfarm 1 & Landfarm 2	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-15	1996	Subsurface Soil	Covered Ditch Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-16	1996	Subsurface Soil	Southwest corner of site	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-17	1996	Subsurface Soil	Between Greenfield Creek and the earthen berm	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-18	1996	Subsurface Soil	South central portion of the site	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-19	1996	Subsurface Soil	South of Treated Wood Storage Area A (TWSA)	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-20	1996	Subsurface Soil	West of Track Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
SB-21	1996	Subsurface Soil	Track Area	> 2'	Stainless Steel Split Spoon or Hand Auger	To confirm presence or absence of contamination	Black & Veatch		
BK-S1	1985	Sediment	Overflow stream from Greenfield Lake	Surface	WSBSOPQAM, 1980	To establish background levels	NUS Corporation	Semi-Volatiles Volatiles Metals	unknown unknown unknown
RB-5	1985	Sediment	End of Jetty Cape Fear River	Surface	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
SS-1	1992	Sediment	East of railroad crossing in Greenfield Creek	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	ViroGroup	Semi-Volatiles Volatiles Arsenic Chromium Copper Lead	8270 8240 7060 6010 6010 6010
SS-2	1992	Sediment	East of the site in offsite ditch	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	ViroGroup		
SS-3	1992	Sediment	East of the site near the entrance gates	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	ViroGroup		
SS-4	1992	Sediment	Ditch southeast of MW-26	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-5	1992	Sediment	Ditch southeast of MW-14	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-6	1992	Sediment	Ditch southeast of MW-14	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-7	1992	Sediment	Ditch southeast of MW-26	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
SS-8	1992	Sediment	Ditch west of Optimist Park	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-9	1992	Sediment	Mouth of Greenfield Creek	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-10	1992	Sediment	Greenfield Creek	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-10A	1993	Sediment	Greenfield Creek	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-11	1992	Sediment	Greenfield Creek	< 2'	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-12	1996	Sediment	Tributary to Greenfield Creek southwest of railroad crossing	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	ViroGroup	Semi-Volatiles	8270
SS-12DUP	1996	Sediment	Tributary to Greenfield Creek southwest of railroad crossing	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	ViroGroup	Volatiles	8240
SS-13	1996	Sediment	Tributary to Greenfield Creek southwest of railroad crossing	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	ViroGroup	Acid Volatile Sulfide	68-03-3534
SS-14	1996	Sediment	Northwest of site in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	ViroGroup	AVS-SEM Extractable Metals	6010
SS-15	1996	Sediment	Northwest property boundary in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup	Arsenic	
SS-16	1996	Sediment	North Slip in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup	Cadmium	
SS-16DUP	1996	Sediment	North Slip in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup	Chromium	
SS-17	1996	Sediment	Near former Pier in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup	Copper	
SS-18	1996	Sediment	Near former Pier in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup	Lead	
SS-19	1996	Sediment	Southern Slip in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup	Nickel	
SS-20	1996	Sediment	Southern Slip in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup	Zinc	
SS-21	1996	Sediment	Southern Slip in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-22	1996	Sediment	West of Treated Wood Storage Area B (TWSB) in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-23	1996	Sediment	Near Outfall of Greenfield Creek in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SS-24	1996	Sediment	Southwest of site in Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	ViroGroup		
SD-01	1996	Sediment	East of the site near the entrance gates	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To establish background levels	Black & Veatch	Semi-Volatiles	8270
SD-02	1996	Sediment	Not Collected					Volatiles	8240
SD-03	1996	Sediment	East of the site in the offsite ditch	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch	Arsenic	6010
SD-04	1996	Sediment	Not Collected					Cadmium	6010
SD-05	1996	Sediment	Ditch south of Non-Treated Wood Storage Area A (NTA)	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch	Chromium	6010
SD-06	1996	Sediment	Ditch southeast of Non-Treated Wood Storage Area B (NTB)	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch	Copper	6010
SD-07	1996	Sediment	Ditch west of Optimist Park	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch	Lead	6010
SD-08	1996	Sediment	Greenfield Creek downstream of the confluence with ditch	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch	Nickel	6010
								Zinc	6010

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
SD-09	1996	Sediment	Greenfield Creek downstream of SD-08	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-10	1996	Sediment	Near the Outfall of Greenfield Creek into Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-11	1996	Sediment	In the Cape Fear River west of Large Storage Tank Area	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-12	1996	Sediment	Northwest property boundary at the Cape Fear River	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-13	1996	Sediment	Non-Treated Wood Storage Area B (NTB)	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-14	1996	Sediment	South of the Covered Ditch Area	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-15	1996	Sediment	South central portion of the site	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-16	1996	Sediment	Southwestern portion of the site	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-17	1996	Sediment	Southwestern portion of the site	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-18	1996	Sediment	Southwestern portion of the site	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-19	1996	Sediment	Southwestern portion of the site	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
SD-20	1996	Sediment	Southwestern portion of the site	Surface	Stainless Steel Spoon, Hand Auger or Ponar Dredge	To determine presence or absence of contamination	Black & Veatch		
RR Bridge	1983	Surface Water	Railroad Bridge upstream of site North of Wilmington	Surface	Directly into Lab provided containers	To establish background levels	Southern Wood Piedmont	Semi-Volatiles Arsenic Chromium Copper	8270 6010 6010 6010
City POTW	1983	Surface Water	City of Wilmington POTW downstream of site	Surface	Directly into Lab provided containers	To establish background levels	Southern Wood Piedmont		
Hwy #74 Bridge	1983 - Present	Surface Water	Northwest of site in Cape Fear River	Surface	Directly into Lab provided containers	To establish background levels	Southern Wood Piedmont		
Old Slip	1983 - Present	Surface Water	Cape Fear River west of Treated Wood Storage Area B (TWSB)	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Southern Wood Piedmont		
Mouth of Greenfield Creek	1983 - Present	Surface Water	Near the Outfall of Greenfield Creek in Cape Fear River	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Southern Wood Piedmont		
State Ports Authority	1983 - Present	Surface Water	Southwest of site in Cape Fear River	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Southern Wood Piedmont		
BK-W1	1985	Surface Water	Overflow stream from Greenfield Lake	Surface	WSBSOPQAM, 1980	To establish background levels	NUS Corporation	Semi-Volatiles Volatiles Metals	Unknown Unknown Unknown
RB-W	1985	Surface Water	End of Jetty Cape Fear River	Surface	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
SW1	1996	Surface Water	Greenfield Creek below Greenfield Lake Dam	Surface	Directly into Lab provided containers	To establish background levels	ViroGroup	Semi-Volatiles Volatiles Arsenic Chromium Copper	8270 8240 6010 6010 6010
SW2	1996	Surface Water	East of railroad crossing at Greenfield Creek	Surface	Directly into Lab provided containers	To establish background levels	ViroGroup		
SW3	1996	Surface Water	Southern end of ditch	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	ViroGroup		
SW4	1996	Surface Water	Tributary to Greenfield Creek southwest of railroad crossing	Surface	Directly into Lab provided containers	To establish background levels	ViroGroup		
SW4DUP	1996	Surface Water	Tributary to Greenfield Creek southwest of railroad crossing	Surface	Directly into Lab provided containers	To establish background levels	ViroGroup		
SW5	1996	Surface Water	Mouth of Greenfield Creek	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	ViroGroup		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
SW-01	1996	Surface Water	East of the site near the entrance gates	Surface	Directly into Lab provided containers	To establish background levels	Black & Veatch	Semi-Volatiles Volatiles Inorganics Pesticides PCBs	Unknown Unknown Unknown Unknown Unknown
SW-01DUP	1996	Surface Water	East of the site near the entrance gates	Surface	Directly into Lab provided containers	To establish background levels	Black & Veatch		
SW-02	1996	Surface Water	Not Collected						
SW-03	1996	Surface Water	East of the railroad crossing in Greenfield Creek	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Black & Veatch		
SW-04	1996	Surface Water	Ditch west of Optimist Park	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Black & Veatch		
SW-05	1996	Surface Water	Greenfield Creek downstream of ditch	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Black & Veatch		
SW-06	1996	Surface Water	Greenfield Creek downstream of SD-08	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Black & Veatch		
SW-07	1996	Surface Water	Near the Outfall of Greenfield Creek into Cape Fear River	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Black & Veatch		
SW-08	1996	Surface Water	In the Cape Fear River west of Large Storage Tank Area	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Black & Veatch		
SW-09	1996	Surface Water	Northwest property boundary at the Cape Fear River	Surface	Directly into Lab provided containers	To determine presence or absence of contamination	Black & Veatch		
CW1	1981 - 1983	Groundwater	Non-Treated Wood Storage Area B (NTB)	Shallow	Teflon Tubing or Polyethylene Bailers	Geotechnical	S & ME	Phenols Pentachlorophenol Arsenic Chromium Copper	SM 510-B GC 206.2 218.1 220.1
CW2	1981 - 1983	Groundwater	Treated Wood Storage Area A (TWSA)	Shallow	Teflon Tubing or Polyethylene Bailers	Geotechnical	S & ME		
CW3	1981 - 1983	Groundwater	Treated Wood Storage Area B (TWSB)	Shallow	Teflon Tubing or Polyethylene Bailers	Geotechnical	S & ME		
CW4	1981 - 1983	Groundwater	Production Area	Intermediate	Teflon Tubing or Polyethylene Bailers	Geotechnical	S & ME		
CW5	1981 - 1983	Groundwater	Non-Treated Wood Storage Area A (NTA)	Shallow	Teflon Tubing or Polyethylene Bailers	Geotechnical	S & ME		
B2	1992	Temporary Groundwater	Treated Wood Storage Area B (TWSB)	Shallow	Teflon Tubing or Polyethylene Bailers	Abandoned	ETE	Semi-Volatiles Volatiles Arsenic Chromium Copper Lead	8270 8240 7060 6010 6010 6010
B3	1992	Temporary Groundwater	Treated Wood Storage Area A (TWSA)	Shallow	Teflon Tubing or Polyethylene Bailers	Abandoned	ETE		
B4	1992	Temporary Groundwater	Treated Wood Storage Area A (TWSA)	Shallow	Teflon Tubing or Polyethylene Bailers	Abandoned	ETE		
B5	1992	Temporary Groundwater	Non-Treated Wood Storage Area B (NTB)	Shallow	Teflon Tubing or Polyethylene Bailers	Abandoned	ETE		
B6	1992	Temporary Groundwater	Non-Treated Wood Storage Area B (NTB)	Shallow	Teflon Tubing or Polyethylene Bailers	Abandoned	ETE		
GW-1	1985	Groundwater	Non-Treated Wood Storage Area B (NTB)	Shallow	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation	Semi-Volatiles Volatiles Metals	Unknown Unknown Unknown
GW-2	1985	Groundwater	Treated Wood Storage Area A (TWSA)	Shallow	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
GW-4	1985	Groundwater	Production Area	Intermediate	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
GW-5	1985	Groundwater	Non-Treated Wood Storage Area A (NTA)	Shallow	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		
AW-01	1985	Groundwater	Artesian Well Greenfield Park	Shallow	WSBSOPQAM, 1980	To determine presence or absence of contamination	NUS Corporation		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
MW-06	1985 - 1998	Groundwater	North of Landfarm 1 and Landfarm 2	Shallow	Teflon Tubing or Polyethylene Bailers	To establish background levels upgradient of landfarm	Law Environmental Services	Semi-Volatiles Volatiles	8270 8240
MW-07	1985 - 1998	Groundwater	West of Landfarm 1 and Landfarm 2	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Law Environmental Services	Arsenic Chromium	7060 6010
MW-08	1985 - 1998	Groundwater	Southwest of Landfarm 1 and Landfarm 2	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Law Environmental Services	Copper Lead	6010 6010
MW-08A	1992 - 1998	Groundwater	West of MW-08	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE	Total Kjeldahl Nitrogen-N Nitrate + Nitrite-N	351.2 353.1
MW-09	1985 - 1998	Groundwater	South of Landfarm 1 and Landfarm 2	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Law Environmental Services	Total Nitrogen Total Phosphorous	Unknown 365.1
MW-10	1992 - 1998	Groundwater	Production Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE	Total Organic Carbon Chloride	415.1 325.2
MW-11	1992 - 1996	Groundwater	CCA & Creosote Treatment Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE	Hydrocarbons	8015
MW-11A	1992 - 1998	Groundwater	Northwest of MW-11	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE		
MW-11B	1993 - 1996	Groundwater	Southwest of MW-11	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup	1996 Semi-Volatiles Volatiles	1996 Unknown Unknown
MW-12	1992 - 1998	Groundwater	Production Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE	Inorganics Pesticides	Unknown Unknown
MW-13	1992 - 1998	Groundwater	Production Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE	PCBs	Unknown
MW-14	1992 - 1996	Groundwater	Covered Ditch Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE	1998 Semi-Volatiles	1998 8270
MW-14A	1993 - 1998	Groundwater	East of MW-14	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup	Volatiles Arsenic	8010/8020 6010
MW-15	1992 - 1998	Groundwater	CCA Treatment Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE	Chromium Copper	6010 6010
MW-16	1992 - 1998	Groundwater	Diesel Fuel Storage Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE		
MW-17	1992 - 1998	Groundwater	Diesel Fuel Storage Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ETE		
MW-18	1992 - 1998	Groundwater	North ditch area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-19	1992 - 1998	Groundwater	Southern Treated Wood Storage Area A (TWSA)	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-19A	1992 - 1998	Groundwater	East of MW-19	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-20	1992 - 1998	Groundwater	Non-Treated Wood Storage Area B (NTB)	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-20A	1993 - 1998	Groundwater	South of MW-20	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-21	1992 - 1998	Groundwater	Non-Treated Wood Storage Area B (NTB)	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-22	1992 - 1996	Groundwater	Large Storage Tank Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-22A	1993 - 1998	Groundwater	East of MW-22	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-23	1992 - 1998	Groundwater	Southern Treated Wood Storage Area A (TWSA)	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-24	1992 - 1998	Groundwater	South central portion of the site	Shallow	Teflon Tubing or Polyethylene Bailers	Abandoned	ViroGroup		
MW-24R Abandoned	1993	Groundwater	South of Treated Wood Storage Area A (TWSA)	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-24A	1993 - 1998	Groundwater	West of MW-24R	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-25	1992 - 1998	Groundwater	South of Covered Ditch Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-26	1992 - 1998	Groundwater	Covered Ditch Area	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-27	1993 - 1998	Groundwater	Northeast corner of site along northern ditch	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		

TABLE 1-1. SAMPLE DATABASE SUMMARY TABLE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Sample Code	Date	Sample Media	Sample Location	Depth/Aquifer	Sample Method	Justification	Consultant	Parameter	Analytical Method
MW-28	1993 - 1998	Groundwater	West of railroad tracks along eastern ditch	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-28A	1993 - 1998	Groundwater	Southeast of MW-28	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-29	1993 - 1998	Groundwater	Southeastern portion of site adjacent to Greenfield Creek	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-29A	1993 - 1998	Groundwater	South of MW-29	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-30	1993 - 1998	Groundwater	Northwest of MW-29	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	ViroGroup		
MW-31	1996 - 1998	Groundwater	Southwest corner of the site	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-32	1996 - 1998	Groundwater	East of MW-31	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-33	1996 - 1998	Groundwater	East of MW-32	Deep	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-34	1996 - 1998	Groundwater	Southern boundary of the site	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-35	1996 - 1998	Groundwater	South of MW-34	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-36	1996 - 1998	Groundwater	Southwest of MW-35	Deep	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-37	1996 - 1998	Groundwater	South of Optimist Park	Shallow	Teflon Tubing or Polyethylene Bailers	To establish background levels	Black & Veatch		
MW-38	1996 - 1998	Groundwater	North of MW-37	Intermediate	Teflon Tubing or Polyethylene Bailers	To establish background levels	Black & Veatch		
MW-39	1996 - 1998	Groundwater	North of MW-38	Deep	Teflon Tubing or Polyethylene Bailers	To establish background levels	Black & Veatch		
MW-40	1996 - 1998	Groundwater	Landfarm 1 & Landfarm 2	Shallow	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-41	1996 - 1998	Groundwater	East of MW-40	Intermediate	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
MW-42	1996 - 1998	Groundwater	East of MW-41	Deep	Teflon Tubing or Polyethylene Bailers	To determine presence or absence of contamination	Black & Veatch		
BIO-01	1996	Biological	Not Collected					Semi-Volatiles Pesticides PCBS	Unknown Unknown Unknown
BIO-02	1996	Biological	Not Collected						
BIO-03	1996	Biological	Not Collected						
BIO-04	1996	Biological	Not Collected						
BIO-05	1996	Biological	Not Collected						
BIO-06	1996	Biological	Not Collected						
BIO-07	1996	Biological, Fish Tissue	In Cape Fear River near southwestern portion of site	Surface	Hook & Line	To determine presence or absence of contamination	Black & Veatch		
BIO-08	1996	Biological, Fish Tissue	In Cape Fear River west of Large Storage Tank Area	Surface	Hook & Line	To determine presence or absence of contamination	Black & Veatch		
BIO-09	1996	Biological, Fish Tissue	East of site in Greenfield Lake	Surface	Hook & Line	To determine presence or absence of contamination	Black & Veatch		

Note: WSBSOPQAM, 1980 - Water Surveillance Branch Standard Operating Procedures and Quality Assurance Manual, USEPA Region IV, August, 1980

< - Less than
> - Greater than

TABLE 2-1

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	RG	[1]SWP-1 4/30/82	[1]SWP-3 4/30/82	[1]NCDHR-1 4/30/82	[1]NCDHR-3 4/30/82	[2]Area A 6/83-9/83	[2]Area B-1 6/83-9/83	[2]Area B-2 6/83-9/83	[2]Area B-3 6/83-9/83	[2]Area B-4 6/83-9/83	[2]Area B-5 6/83-9/83	[2]Area B-6 6/83-9/83	[2]Area B-7 6/83-9/83	[2]Area C-1 6/83-9/83	[2]Area C-2 6/83-9/83	[2]Area D-1 6/83-9/83	[2]Area D-2 6/83-9/83	[2]Area D-3 6/83-9/83
1,2,4-Trichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	1.46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	490	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	4.2	ND	ND	300	16	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	190	ND	1000+	200	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzacephenanthrylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzidine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.33	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	0.33	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(j)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	ND	ND	500	90	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	**RG	[1]SWP-1	[1]SWP-3	[1]NCDHR-1	[1]NCDHR-3	[2]Area A	[2]Area B-1	[2]Area B-2	[2]Area B-3	[2]Area B-4	[2]Area B-5	[2]Area B-6	[2]Area B-7	[2]Area C-1	[2]Area C-2	[2]Area D-1	[2]Area D-2	[2]Area D-3
Extractable Organics		4/30/82	4/30/82	4/30/82	4/30/82	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83	6/83-9/83
Bis(2-ethylhexyl)Phthalate	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butyl Benzyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carboxylic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.33	240	200	400	120	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	380	190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanathrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octylphthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylideneindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	1800	970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	5.6	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene (HCB)	0.0004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	ND	ND	8.0	2.0	1.8	0.1	1.2	ND	0.9	ND	ND	2.6	ND	3.6	81	420	0.2
Nitrobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.7	1300	1000	3000+	2000+	13	4.9	83	0.2	4.5	0.66	0.98	0.48	3	104	13	3.4	0.17
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	4.2	2200	100	-	-	26	35	9.2	ND	1.6	ND	3.7	29	0.7	16	3,000	10,000	4.6
Phenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	4.2	1090	640	1000+	500	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenols	1.7	-	-	-	-	3.5	2.5	5.2	0.008	0.16	0.01	0.18	0.14	0.12	2.9	7.9	1.2	0.022
Tetrahydrodimethylpyranone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1] SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area
[2] Area A - Treating Area
[2] Area B - CCA Area
[2] Area C - Creo-Penta Track Area
[2] Area D - Old Ditch Area
[2] Area E - Bulk Storage Area (Creosote Storage Area Only)
[2] Area F - Banding House Area

[2] Area G - Product Storage Area
[3] #1 - Road in Front of Old #5 Pole Machine
[3] #2 - Road in Front of Old #5 Pole Machine
[3] #3 - Road Crossing Separating State Ports & City
[3] #4 - Road Crossing Separating State Ports & City

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	RG	[2]Area E 6/83-9/83	[2]Area F 6/83-9/83	[2]Area G-1 6/83-9/83	[2]Area G-2 6/83-9/83	[2]Area G-3 6/83-9/83	JA-C1 1/7/85	LA-C2 1/7/85	LB-C3 1/7/85	LC-C4 1/7/85	NTA-1 2/26/91	NTA-2 2/26/91	NTA-3 2/26/91	NTA-4 2/26/91	NTA-5 2/26/91	NTA-6 2/26/91	NTA-7 2/26/91	NTA-8 2/26/91	NTA-9 2/26/91
1,2,4-Trichlorobenzene		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	1.46	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	0.400J	0.500J	0.400J	ND	-	-	-	-	-	-	-	-	-
2-Chlorophenol	0.33	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	ND	ND	ND *	ND	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	-	-	-	-	-	ND	ND	ND	16	-	-	-	-	-	-	-	-	-
2-Methylphenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
4-Chloroaniline		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	-	-	-	-	-	ND	ND	ND	170	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	4.2	-	-	-	-	-	ND	1.5	1.0J	6.3	ND	ND	ND	ND	ND	ND	ND	0.48	ND
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aniline		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Anthracene	42	-	-	-	-	-	2.0J	5.2	2.0J	170	0.77	ND	0.79	ND	0.36	0.55	1.1	0.95	ND
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzacephenanthrylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzidine		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.33	-	-	-	-	-	2.7	11	3.9	130	1.2	1.6	1.1	ND	0.57	0.47	0.97	1.5	ND
Benzo(a)Pyrene	0.33	-	-	-	-	-	4.6	11	5.8	37	1.0	1.1	1.0	ND	0.41	ND	0.77	1.3	ND
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	5.6	14	7.3	48	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	5.6	12	6.6	45	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	40JN	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	4.1	5.9	4.1	0.80	2.2	ND	1.7	2.9	ND
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	4JN	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	-	-	-	-	-	ND	ND	ND	9	-	-	-	-	-	-	-	-	-
Benzo(j)Fluoranthene		-	-	-	-	-	3JN	6JN	4JN	40JN	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	*RG	[2]Area E 6/83-9/83	[2]Area F 6/83-9/83	[2]Area G-1 6/83-9/83	[2]Area G-2 6/83-9/83	[2]Area G-3 6/83-9/83	JA-C1 1/7/85	LA-C2 1/7/85	LB-C3 1/7/85	LC-C4 1/7/85	NTA-1 2/26/91	NTA-2 2/26/91	NTA-3 2/26/91	NTA-4 2/26/91	NTA-5 2/26/91	NTA-6 2/26/91	NTA-7 2/26/91	NTA-8 2/26/91	NTA-9 2/26/91
Bis(2-ethylhexyl)Phthalate	3	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Butyl Benzyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.33	-	-	-	-	-	-	-	-	-	ND	0.54	0.49	ND	ND	ND	1.1	1.0	ND
Carboxylic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.33	-	-	-	-	-	ND	ND	7.1	120	1.7	2.7	1.7	ND	0.93	0.93	1.5	1.7	ND
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	70JN	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.33	-	-	-	-	-	0.300J	0.900J	0.300J	110	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	8JN	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	50JN	-	-	-	-	-	-	-	-	-
Dimethylphenanathrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	8JN	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	-	-	-	-	-	ND	ND	ND	6.5	-	-	-	-	-	-	-	-	-
Di-N-Octylphthalate		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylideneindene		-	-	-	-	-	-	-	-	10JN	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	-	-	-	-	-	15	25	10	29	2.5	4.0	2.4	0.52	1.5	1.3	1.7	2.0	ND
Fluorene	5.6	-	-	-	-	-	ND	ND	ND	170	-	-	-	-	-	-	-	-	-
Fluorenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene (HCB)	0.0004	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	-	-	-	-	-	ND	ND	ND	10J	0.68	0.66	0.85	ND	ND	ND	ND	0.58	ND
Isophorone		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	40JN	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	20JN	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	-	-	ND	ND	ND	ND	1.2	ND	ND	ND	ND	0.66	ND	ND	ND	0.99	ND	ND
Nitrobenzene		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.7	-	-	50	0.24	0.32	ND	4.0J	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	4.2	-	-	1.1	0.4	2.1	4.4	5.4	1.4	390	0.82	ND	1.0	ND	0.42	0.44	1.1	0.47	ND
Phenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	4.2	-	-	-	-	-	12	22	10J	220	-	-	-	-	-	-	-	-	-
Tetrachlorophenols	1.7	-	-	1.9	0.012	0.068	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrodimethylpyranone		-	-	-	-	-	7JN	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	20JN	-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	20JN	-	-	-	-	-	-	-	-	-

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Mat

ND Not Detected

\- Not Analyzed

*RG Shaded Cells Exceed Preliminary Soil Rer

[1]SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area

[2]Area A - Treating Area

[2]Area B - CCA Area

[2]Area C - Creo-Penta Track Area

[2]Area D - Old Ditch Area

[2]Area E - Bulk Storage Area (Creosote Storage Area Only)

[2]Area F - Banding House Area

[2]Area G - Product Storage Area

[3]#1 - Road In Front of Old #5 Pole Machine

[3]#2 - Road In Front of Old #5 Pole Machine

[3]#3 - Road Crossing Separating State Ports & City

[3]#4 - Road Crossing Separating State Ports & City

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	RG	NTB-1	NTB-2	NTB-3	NTB-4	NTB-5	NTB-6	NTB-7	NTB-8	NTB-9	NTB-10	NTB-11	NTB-12	NTB-13	TWS-1A	TWS-2A	TWS-3A	TWS-4A	TWS-5A	TWS-6A	TWS-7A
Extractable Organics		3/1/91	3/1/91	2/28/91	3/1/91	3/1/91	2/28/91	2/28/91	3/1/91	3/1/91	3/1/91	3/1/91	3/1/91	3/1/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/27/91
1,2,4-Trichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	1.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	4.2	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06	0.48	ND	0.66	0.50
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	7.6	3.7	ND	84	ND	ND	ND	ND	ND	1.3	ND	ND	ND	36	0.68	1.7	1.4	1.1	2.3	1.2
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzacephenanthrylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzidine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.33	3.1	0.56	ND	25	ND	0.38	ND	ND	ND	3.1	0.50	ND	0.692	6.2	2.2	1.7	2.6	0.88	5.0	2.4
Benzo(a)Pyrene	0.33	4.3	ND	ND	17	ND	0.39	ND	ND	ND	1.2	ND	ND	ND	5.1	1.3	1.4	1.4	0.58	3.5	1.6
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	11	1.0	0.45	50	ND	1.7	1.5	1.2	2.0	5.5	1.7	1.2	1.3	12	6.7	7.0	8.2	0.73	13	7.4
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(j)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	"RG	NTB-1 3/1/91	NTB-2 3/1/91	NTB-3 2/28/91	NTB-4 3/1/91	NTB-5 3/1/91	NTB-6 2/28/91	NTB-7 2/28/91	NTB-8 3/1/91	NTB-9 3/1/91	NTB-10 3/1/91	NTB-11 3/1/91	NTB-12 3/1/91	NTB-13 3/1/91	TWS-1A 2/28/91	TWS-2A 2/28/91	TWS-3A 2/28/91	TWS-4A 2/28/91	TWS-5A 2/28/91	TWS-6A 2/28/91	TWS-7A 2/27/91
Bis(2-ethylhexyl)Phthalate	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butyl Benzyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.33	1.6	2.2	ND	11	ND	ND	ND	ND	ND	0.51	ND	ND	ND	7.1	ND	0.77	1.0	ND	1.8	0.90
Carboxylic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.33	4.6	0.74	0.40	52	0.49	0.82	0.75	0.79	1.2	4.5	0.76	0.59	0.93	8.0	3.5	3.2	4.8	0.95	8.1	3.6
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.492	ND
Dibenzofuran	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanathrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octylphthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylideneindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	7.5	1.3	0.39	97	0.70	0.91	0.83	0.68	1.0	5.8	0.63	0.58	0.86	25	3.4	3.9	5.9	1.2	16	4.2
Fluorene	5.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene (HCB)	0.0004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	3.8	ND	ND	ND	ND	ND	ND	ND	ND	0.57	ND	ND	ND	ND	0.53	0.84	0.63	ND	1.9	1.0
Isophorone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	0.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	4.2	2.0	1.0	ND	54	ND	ND	ND	ND	ND	3.0	ND	ND	ND	13	ND	0.75	0.75	0.64	2.4	0.73
Phenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenols	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrodimethylpyranone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Mat

ND Not Detected

\- Not Analyzed

"RG Shaded Cells Exceed Preliminary Soil Rer

[1] SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area

[2] *Area A - Treating Area*

[2] Area B - CCA Area

[2] Area C - Creo-Penta Track Area

[2] *Area D - Old Ditch Area*

[2] Area E - Bulk Storage Area (Creosote Storage Area Only)

[2] Area F - Banding House Area

[2] Area G - Product Storage Area

[3] #1 - Road in Front of Old #5 Pole Machine

[3] #2 - Road in Front of Old #5 Pole Machine

[3] #3 - Road Crossing Separating State Ports & City

[3] #4 - Road Crossing Separating State Ports & City

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	[a]RG	TWS-8A 2/27/91	TWS-9A 2/27/91	TWS-10A 2/27/91	TWS-11A 2/27/91	TWS-12A 2/27/91	TWS-13A 2/27/91	[b]#1 3/12/93	[b]#2 3/12/93	[b]#3 3/12/93	[b]#4 3/12/93	TWSB1A 2/14/96	TWSB2A 2/14/96	TWSB3A 2/14/96
1,2,4-Trichlorobenzene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	ND	ND	ND
2,4,6-Trichlorophenol		-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
2,4-Dimethylphenol	1.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
2-Chlorophenol	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
4-Chloro-3-Methylphenol		-	-	-	-	-	-	-	-	-	-	ND	ND	ND
4-Chloroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Acenaphthene	1.6	ND	ND	0.93	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	4.2	ND	ND	2.5	0.46	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-
Aniline		-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	1.2	ND	14	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzacephenanthrylene		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzidine		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Benzo(a)Anthracene	0.33	1.2	ND	23	2.9	ND	ND	ND	ND	ND	ND	2.1	0.50	ND
Benzo(a)Pyrene	0.33	0.89	ND	17	1.6	ND	ND	ND	ND	ND	ND	2.6	0.45	ND
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	2.8	1.1	ND
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	4.9	2.0	60	2.7	ND	ND	-	-	-	-	-	-	-
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Benzo(j)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	-	-	-	-	-	-	ND	ND	ND	ND	0.99	0.40	ND
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	*RG	TWS-8A 2/27/91	TWS-9A 2/27/91	TWS-10A 2/27/91	TWS-11A 2/27/91	TWS-12A 2/27/91	TWS-13A 2/27/91	[3]#1 3/12/93	[3]#2 3/12/93	[3]#3 3/12/93	[3]#4 3/12/93	TWSB1A 2/14/96	TWSB2A 2/14/96	TWSB3A 2/14/96
Bis(2-ethylhexyl)Phthalate	3	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Butyl Benzyl Phthalate		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Carbazole	0.33	0.74	ND	3.4	0.93	ND	ND	-	-	-	-	ND	ND	ND
Carboxylic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.33	2.5	0.89	27	4.0	ND	ND	ND	ND	ND	ND	2.5	0.88	ND
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	ND	ND	2.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanathrene		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Di-N-Octylphthalate		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylideneindene		-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	3.6	1.3	33	4.9	ND	0.66	ND	ND	ND	ND	1.6	0.86	ND
Fluorene	5.6	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Fluorenone		-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene (HCB)	0.0004	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Hexachlorobutadiene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Hexachloroethane		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	0.64	ND	7.2	0.68	ND	ND	ND	ND	ND	ND	0.97	ND	ND
Isophorone		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	ND	ND	0.87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
p-Chloro-m-cresol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-
Pentachlorophenol	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	4.2	0.74	ND	4.2	0.43	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	4.2	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-
Tetrachlorophenols	1.7	ND	ND	2.8	ND	ND	ND	-	-	-	-	ND	ND	ND
Tetrahydrodimethylpyranone		-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Mat
ND Not Detected
\- Not Analyzed
*RG Shaded Cells Exceed Preliminary Soil Rer

[1] SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area
[2] Area A - Treating Area
[2] Area B - CCA Area
[2] Area C - Creo-Penta Track Area
[2] Area D - Old Ditch Area
[2] Area E - Bulk Storage Area (Creosote Storage Area Only)
[2] Area F - Banding House Area
[2] Area G - Product Storage Area
[3] #1 - Road In Front of Old #5 Pole Machine
[3] #2 - Road In Front of Old #5 Pole Machine
[3] #3 - Road Crossing Separating State Ports & City
[3] #4 - Road Crossing Separating State Ports & City

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	~RG	TWSB4A 2/14/96	TWSB5A 2/14/96	TWSB6A 2/14/96	TWSB7A 2/14/96	TWSB8A 2/14/96	TWSB9A 2/14/96	TWSB10A 2/14/96	TWSB11A 2/14/96	TWSB12A 2/14/96	TWSB13A 2/14/96	TWSB14A 2/14/96	TWSB15A 2/14/96
1,2,4-Trichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	1.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	-	-	-	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-
Aniline		-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	ND	15	ND	ND	ND	ND	0.45	ND	ND	ND	ND	2.2
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-
Benzacephenanthrylene		-	-	-	-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-
Benzidine		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.33	4.8	59	2.7	0.64	0.85	ND	0.90	2.4	ND	10	2.4	7.7
Benzo(a)Pyrene	0.33	11	28	2.0	0.36	0.52	ND	0.54	1.3	ND	8.8	1.8	5.5
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	22	60	5.6	1.4	1.5	0.58	2.3	3.9	0.66	20	7.0	13
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(j)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	7.1	30	1.9	0.55	0.61	ND	1.0	1.6	ND	10	2.5	5.9
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	*RG	TWSB4A 2/14/96	TWSB5A 2/14/96	TWSB6A 2/14/96	TWSB7A 2/14/96	TWSB8A 2/14/96	TWSB9A 2/14/96	TWSB10A 2/14/96	TWSB11A 2/14/96	TWSB12A 2/14/96	TWSB13A 2/14/96	TWSB14A 2/14/96	TWSB15A 2/14/96
Bis(2-ethylhexyl)Phthalate	3	-	-	-	-	-	-	-	-	-	-	-	-
Butyl Benzyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.33	ND	ND	ND	ND	ND	ND	0.37	ND	ND	ND	ND	ND
Carboxylic Acid		-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.33	6.3	68	4.7	1.5	1.4	0.43	2.0	3.7	0.54	17	5.2	9.8
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanathrene		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octylphthalate		-	-	-	-	-	-	-	-	-	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	-	-	-	-	-
Ethylideneindene		-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	6.1	85	4.6	3.3	2.2	0.58	3.6	6.8	0.53	17	8.8	12
Fluorene	5.6	-	-	-	-	-	-	-	-	-	-	-	-
Fluorenone		-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene (HCB)	0.0004	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene		-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	6.4	10	1.5	ND	ND	ND	0.40	0.92	ND	6.2	ND	3.1
Isophorone		-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene		-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	4.2	ND	ND	0.73	0.71	ND	ND	0.53	ND	ND	ND	ND	2.5
Phenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	4.2	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenols	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrodimethylpyranone		-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	-	-	-	-

Notes:

- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Mat
- ND Not Detected
- \- Not Analyzed
- *RG Shaded Cells Exceed Preliminary Soil Rer

[1] SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area
[2] Area A - Treating Area
[2] Area B - CCA Area
[2] Area C - Creo-Penta Track Area
[2] Area D - Old Ditch Area
[2] Area E - Bulk Storage Area (Creosote Storage Area Only)
[2] Area F - Banding House Area

[2] Area G - Product Storage Area
[3] #1 - Road in Front of Old #5 Pole Machine
[3] #2 - Road in Front of Old #5 Pole Machine
[3] #3 - Road Crossing Separating State Ports & City
[3] #4 - Road Crossing Separating State Ports & City

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	RG	TWSB15ADUP 2/14/96	PDA1A 2/14/96	PDA2A 2/14/96	PDA3A 2/14/96	PDA4A 2/14/96	PDA5A 2/14/96	PDA6A 2/14/96	PDA7A 2/14/96	PDA8A 2/14/96	PDA9A 2/14/96	PDA10A 2/14/96	PDA11A 2/14/96
1,2,4-Trichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	1.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	-	-	-	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.45	ND	ND
Acenaphthylene	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.38	ND	ND
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-
Aniline		-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	ND	ND	1.1	ND	ND	3.6	2.6	ND	21	4.5	ND	ND
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-
Benzacephenanthrylene		-	-	-	-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-
Benzidine		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.33	4.2	6.6	0.53	0.71	ND	1.6	3.7	1.1	8.1	1.4	ND	ND
Benzo(a)Pyrene	0.33	3.6	5.3	0.68	0.90	ND	1.5	3.1	0.67	7.3	1.9	ND	ND
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	8.4	15	1.7	2.4	1.1	6.2	10	1.7	17	3.7	ND	ND
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(j)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	3.4	6.0	0.49	0.86	ND	2.0	3.9	0.67	6.3	1.5	ND	ND
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	*RG	TWSB15ADUP 2/14/96	PDA1A 2/14/96	PDA2A 2/14/96	PDA3A 2/14/96	PDA4A 2/14/96	PDA5A 2/14/96	PDA6A 2/14/96	PDA7A 2/14/96	PDA8A 2/14/96	PDA9A 2/14/96	PDA10A 2/14/96	PDA11A 2/14/96
Bis(2-ethylhexyl)Phthalate	3	-	-	-	-	-	-	-	-	-	-	-	-
Butyl Benzyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.33	ND	ND	ND	ND	ND	0.44	ND	ND	7.8	0.56	ND	ND
Carboxylic Acid		-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.33	6.4	11	0.91	1.4	ND	3.0	7.2	1.3	12	2.0	ND	ND
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	ND	ND	ND	ND	ND	0.51	ND	ND	ND	0.39	ND	ND
Dibenzofuran	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanathrene		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octylphthalate		-	-	-	-	-	-	-	-	-	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	-	-	-	-	-
Ethylideneindene		-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	6.6	13	1.1	1.5	0.90	1.7	9.4	1.9	14	3.0	ND	ND
Fluorene	5.6	-	-	-	-	-	-	-	-	-	-	-	-
Fluorenone		-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene (HCB)	0.0004	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene		-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	2.0	ND	0.63	0.57	ND	1.7	2.9	0.46	5.0	2.0	ND	ND
Isophorone		-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.92	ND	ND
Nitrobenzene		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene		-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	4.2	ND	ND	ND	ND	ND	0.50	2.7	ND	6.7	1.5	ND	ND
Phenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	4.2	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenols	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrahydrodimethylpyranone		-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Mat
ND Not Detected
\- Not Analyzed
*RG Shaded Cells Exceed Preliminary Soil Rer

[1] SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area
[2] Area A - Treating Area
[2] Area B - CCA Area
[2] Area C - Creo-Penta Track Area
[2] Area D - Old Ditch Area
[2] Area E - Bulk Storage Area (Creosote Storage Area Only)
[2] Area F - Banding House Area

[2] Area G - Product Storage Area
[3] #1 - Road in Front of Old #5 Pole Machine
[3] #2 - Road in Front of Old #5 Pole Machine
[3] #3 - Road Crossing Separating State Ports & City
[3] #4 - Road Crossing Separating State Ports & City

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	RG	SS-01 10/4/96	SS-02 10/4/96	SS-03 10/4/96	SS-04 10/4/96	SS-05 10/4/96	SS-06 10/4/96	SS-07 10/4/96	SS-08 10/4/96	SS-09 10/4/96	SS-10 10/4/96	SS-11 10/4/96	SS-12 10/4/96
1,2,4-Trichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	0.090JN	-	-	-	-	-	0.100JN	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	1.46	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	ND	0.120J	ND	ND	ND	ND	0.470J	0.360J	ND	0.230J	ND	0.066J
2-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	-	-	-	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	ND	ND	ND	ND	ND	0.110J	ND	0.300J	ND	ND	ND	0.053J
Acenaphthylene	4.2	ND	ND	ND	ND	0.038J	0.160J	0.470J	0.160J	ND	0.190J	ND	ND
Alkanes		-	-	-	-	-	-	-	0.400JN	-	4JN	-	5J
Aniline		-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	ND	ND	ND	0.050J	0.220J	2.2	0.800J	0.670	0.220J	0.510J	ND	0.120J
Anthracenedione		-	-	-	-	0.300JN	-	0.600JN	1JN	-	-	-	-
Benzacephenanthrylene		-	-	-	-	-	-	4JN	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	0.800JN	0.100JN	-	-	-
Benzidine		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.33	ND	ND	0.110J	ND	0.740	2.7J	4.2	1.5	0.170J	1.8	ND	0.200J
Benzo(a)Pyrene	0.33	0.150J	0.087J	0.140J	0.110J	0.140J	1.4J	5.3	1.0	0.180J	1.3	ND	0.130J
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	0.220J	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	0.220J	0.150J	0.260J	0.300J	1.6	2.8J	13	6.2	0.830J	5.5	ND	0.460J
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	0.110J	0.056J	0.180J	0.079J	0.260J	0.910J	5.1	1.9	0.200J	1.3	ND	0.200J
Benzo(j)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	0.220J	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone (2 Isomers)		-	-	-	-	0.300JN	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	0.700JN	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	0.200JN	-	-	1JN	-	0.300JN	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	0.200JN	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)		SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-08	SS-09	SS-10	SS-11	SS-12
Extractable Organics	*RG	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96
Bis(2-ethylhexyl)Phthalate	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.800	ND
Butyl Benzyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.33	ND	ND	ND	0.077J	0.220J	0.320J	0.400J	0.270J	0.097J	0.360J	ND	0.048J
Carboxylic Acid		-	-	0.700JN	-	-	-	-	-	0.500JN	-	-	0.600JN
Chrysene	0.33	0.220J	0.100J	0.150J	0.310J	1.3	3.9J	6.6	2.7	0.340J	3.6	ND	0.270J
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	0.300JN	-	0.600JN	0.300JN	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	0.33	ND	0.046J	ND	ND	0.042J	0.084J	0.360J	0.590	ND	0.220J	ND	0.066J
Diethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	0.090JN	-	-	-	-	0.400JN	0.200JN	-	0.400JN	-	-
Dimethylphenanathrene		-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	0.500JN	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	ND	0.100J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octylphthalate		-	-	-	-	-	-	-	-	-	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	-	-	-	-	-
Ethylideneindene		-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	0.250J	ND	0.160J	0.52	1.6	9.8	5.5	5.2	0.380	5.0	ND	0.430J
Fluorene	5.6	ND	ND	ND	ND	ND	0.130J	ND	0.230J	ND	ND	ND	ND
Fluorenone		-	-	-	-	0.080JN	-	-	0.200JN	-	0.600JN	-	-
Hexachlorobenzene (HCB)	0.0004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene		-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	0.110J	0.063J	0.140J	0.092J	0.290J	0.910J	5.0	1.6	0.190J	0.240J	ND	0.170J
Isophorone		-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	0.500JN	0.300JN	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	0.200JN	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	0.600JN	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	0.200JN	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	0.200JN	-	-
Methylphenanthrene		-	-	-	-	0.400JN	-	-	0.200JN	-	-	-	-
Methylpyrene		0.100JN	-	-	-	0.090JN	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	4JN	-	-	-	-
Naphthalene	0.42	ND	0.085J	0.062J	ND	ND	0.042J	0.570J	0.620	ND	0.250J	ND	0.180J
Nitrobenzene		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.7	ND	ND	ND	ND	0.170J	4.8	ND	1.2	ND	ND	ND	ND
Perylene		0.200JN	0.100JN	-	0.400JN	0.200JN	-	-	0.090JN	-	0.200JN	-	0.200JN
Phenanthrene	4.2	ND	0.140J	0.072J	0.059J	0.390	1.5	1.6J	1.9	0.071J	0.920	ND	0.240J
Phenol		-	-	-	-	-	-	-	-	-	-	-	-
Phenylnaphthalene		-	-	-	-	0.090JN	-	-	-	-	-	-	-
Pyrene	4.2	0.220J	0.096J	0.180J	0.400J	1.5J	8.0J	9.4J	4.9J	0.580J	4.9J	ND	0.360J
Tetrachlorophenols	1.7	-	-	-	-	-	-	ND	-	-	-	-	-
Tetrahydrodimethylpyranone		-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Mat

ND Not Detected

\- Not Analyzed

*RG Shaded Cells Exceed Preliminary Soil Rer

[1] SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area

[2] Area A - Treating Area

[2] Area B - CCA Area

[2] Area C - Creo-Penta Track Area

[2] Area D - Old Ditch Area

[2] Area E - Bulk Storage Area (Creosote Storage Area Only)

[2] Area F - Banding House Area

[2] Area G - Product Storage Area

[3] #1 - Road In Front of Old #5 Pole Machine

[3] #2 - Road In Front of Old #5 Pole Machine

[3] #3 - Road Crossing Separating State Ports & City

[3] #4 - Road Crossing Separating State Ports & City

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	RG	SS-13 10/4/96	SS-14 10/4/96	SS-15 10/4/96	SS-16 10/4/96	SS-17 10/4/96	SS-18 10/4/96	SS-19 10/4/96	SS-20 10/4/96	SS-21 10/4/96
1,2,4-Trichlorobenzene		-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-
1,2-Diphenylhydrazine		-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol		-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol		-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	1.46	ND	0.070J	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	0.33	-	-	-	-	-	-	-	-	-
2-Chlorophenol	0.33	ND	0.039J	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	ND	0.250J	ND	ND	0.420J	ND	ND	ND	0.047J
2-Methylphenol		-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	-	-	-
3,4-Benzofluoranthene		-	-	-	-	-	-	-	-	-
4,6-Dinitro-o-cresol		-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		-	-	-	-	-	-	-	-	-
4-Chloroaniline		-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	0.039J	0.510	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	4.2	0.120J	11	ND	ND	0.360J	ND	ND	ND	0.037J
Alkanes		-	-	-	-	-	-	-	1J	-
Aniline		-	-	-	-	-	-	-	-	-
Anthracene	42	0.370	33	ND	ND	0.670J	ND	ND	0.034J	0.110J
Anthracenedione		-	-	-	-	0.700JN	-	-	-	0.400JN
Benzacephenanthrylene		-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	0.100JN	-
Benzidine		-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.33	0.190J	21J	ND	ND	3.7	0.350J	0.200J	0.140J	0.270J
Benzo(a)Pyrene	0.33	0.310J	29J	ND	ND	4.7	0.340J	0.250J	0.095J	0.260J
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-
Benzo(b)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-
Benzo(b)Naphthothiophene		-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	0.33	0.780J	34J	ND	ND	12	0.330J	0.280J	0.450J	1.1
Benzo(ghi)Fluoranthene		-	-	-	-	-	-	-	-	-
Benzo(ghi)Perylene	4.2	0.580	17J	ND	ND	4.6	0.250J	0.160J	0.098J	0.360
Benzo(j)Fluoranthene		-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.33	-	-	-	-	-	-	-	-	-
Benzoanthracenone		-	-	-	-	0.500JN	-	-	-	-
Benzoanthracenone (2 isomers)		-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	0.080JN
Benzofluorene		-	-	-	-	-	-	-	0.100JN	-
Benzoic Acid		-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	0.100JN	-	0.100JN	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	0.080JN
Benzyl Alcohol		-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	-	-	-

TABLE 2-1. SURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	*RG	SS-13 10/4/96	SS-14 10/4/96	SS-15 10/4/96	SS-16 10/4/96	SS-17 10/4/96	SS-18 10/4/96	SS-19 10/4/96	SS-20 10/4/96	SS-21 10/4/96
Bis(2-ethylhexyl)Phthalate	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Butyl Benzyl Phthalate		-	-	-	-	-	-	-	-	-
Carbazole	0.33	0.096J	3.5J	ND	ND	0.320J	ND	ND	0.046J	0.063J
Carboxylic Acid		-	-	-	3J	-	-	-	-	-
Chrysene	0.33	0.280J	28J	ND	ND	5.7	0.300J	0.220J	0.290J	0.480
Cyclopentaphenanthrene		-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	0.500JN	-	-	-	0.100JN
Dibenzo(a,h)Anthracene	0.33	-	-	-	-	-	-	-	-	-
Dibenzofuran	0.33	0.047J	0.380	ND	ND	0.300J	ND	ND	ND	0.054J
Diethyl Phthalate		-	-	-	-	-	-	-	-	-
Dihydronaphthofuran		-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	0.400JN	-	-	-	-
Dimethylphenanathrene		-	-	-	-	0.400JN	-	-	-	-
Dimethylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-
Dimethyltetrahydropyran-2-one		-	-	-	-	-	-	-	-	-
Di-N-Butylphthalate	14	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octylphthalate		-	-	-	-	-	-	-	-	-
Ethyleneglycol		-	-	-	-	-	-	-	0.300JN	-
Ethylideneindene		-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	0.400	23	ND	ND	4.8	0.620	0.210J	0.360J	0.520
Fluorene	5.6	0.055J	0.690	ND	ND	ND	ND	ND	ND	ND
Fluorenone		-	-	-	-	0.400JN	-	-	-	-
Hexachlorobenzene (HCB)	0.0004	0.040J	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobutadiene		-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene	0.33	0.550	17J	ND	ND	4.5	0.210J	0.130J	0.097J	0.340J
Isophorone		-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	0.200JN	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-
Methylbenzanthracene		-	-	-	-	-	0.100JN	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-
Methylphenanthrene		-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	0.400JN	0.200JN
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-
Naphthalene	0.42	0.065J	0.620	ND	ND	0.480J	ND	ND	ND	0.082J
Nitrobenzene		-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.7	0.160J	1.9	ND	ND	ND	ND	ND	ND	ND
Perylene		0.200JN	-	-	-	3JN	0.200JN	0.200JN	0.100JN	-
Phenanthrene	4.2	0.210J	3.6J	ND	ND	1.4J	0.150J	0.055J	0.038J	0.210J
Phenol		-	-	-	-	-	-	-	-	-
Phenylnaphthalene		-	-	-	-	-	-	-	-	-
Pyrene	4.2	0.340J	41J	ND	ND	7.2J	0.560	0.230J	0.340J	0.710J
Tetrachlorophenols	1.7	-	-	-	-	-	-	-	-	-
Tetrahydrodimethylpyranone		-	-	-	-	-	-	-	-	-
Trichlorophenols		-	-	-	-	-	-	-	-	-
Trimethylnaphthalenes		-	-	-	-	-	-	-	-	-
Xanthene		-	-	-	-	-	-	-	-	-

Notes:

* Background Location

J Estimated Value

N *Presumptive Evidence of Presence of Mat*

ND Not Detected

\- Not Analyzed

*RG *Shaded Cells Exceed Preliminary Soil Rer*

[1] SWP-1, SWP-3, NCDHR-1, & NCDHR-3 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area

[2] Area A - Treating Area

[2] Area B - CCA Area

[2] Area C - Creo-Penta Track Area

[2] Area D - Old Ditch Area

[2] Area E - Bulk Storage Area (Creosote Storage Area Only)

[2] Area F - Banding House Area

[2] Area G - Product Storage Area

[3] #1 - Road In Front of Old #5 Pole Machine

[3] #2 - Road In Front of Old #5 Pole Machine

[3] #3 - Road Crossing Separating State Ports & City

[3] #4 - Road Crossing Separating State Ports & City

TABLE 2-2

TABLE 2-2. SURFACE SOIL SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	**RG	JA-C1	LA-C2	LB-C3	LC-C4	TWSB1A	TWSB2A	TWSB3A	TWSB4A	TWSB5A	TWSB6A	TWSB7A	TWSB8A	TWSB9A	TWSB10A	TWSB11A
Purgeable Organics		1/7/85	1/7/85	1/7/85	1/7/85	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromomethane		-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloroethane		-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Bromoform		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane		-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane		-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorotrichloromethane		-	0.010JN	0.010JN	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M/P-Xylene	32,000	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	0.0065	ND	ND
Methyl Butyl Ketone		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Methyl Isobutyl Ketone		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Methyl-T-Butyl Ether (MTBE)		-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M-Xylene		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
O&P-Xylene (mixed)		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pinene		-	-	-	0.007JN	-	-	-	-	-	-	-	-	-	-	-
Styrene		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethene		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Trans-1,2-Dichloroethylene		-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylcyclohexanone		-	-	-	0.006JN	-	-	-	-	-	-	-	-	-	-	-
Vinyl Acetate		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- **RG Shaded Cells Exceed Preliminary Soil Remediation Goal

TABLE 2-2. SURFACE SOIL SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	"RG	TWSB12A	TWSB13A	TWSB14A	TWSB15A	/SB15AD	PDA1A	PDA2A	PDA3A	PDA4A	PDA5A	PDA6A	PDA7A	PDA8A	PDA9A	PDA10A	PDA11A
Purgeable Organics		2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorotrichloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M/P-Xylene	32,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0086	ND	0.011	ND
Methyl Butyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Isobutyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl-T-Butyl Ether (MTBE)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M-Xylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O&P-Xylene (mixed)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pinene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylcyclohexanone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Acetate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- - Not Analyzed
- "RG Shaded Cells Exceed Preliminary Soil Remediation Goal

TABLE 2-3

TABLE 2-3. SURFACE SOIL SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Inorganics	**RG	**Naturally Occurring Levels	[1]Area B-1 6/83-9/83	[1]Area B-2 6/83-9/83	[1]Area B-3 6/83-9/83	[1]Area B-4 6/83-9/83	[1]Area B-5 6/83-9/83	[1]Area B-6 6/83-9/83	[1]Area B-7 6/83-9/83	[1]Area B-8 6/83-9/83	[1]Area B-9 6/83-9/83	[1]Area B-1 6/83-9/83	[1]Area B-2 6/83-9/83	[1]Area B-3 6/83-9/83	[1]Area F-1 6/83-9/83	[1]Area F-2 6/83-9/83
Aluminum	74	7,000 - 15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	0.12		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	30	421	576	299	496	552	150	40	266	150	130	32	2.2	4.5
Barium	40	10 - 200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	0.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.1	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NRG	0 - 2,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	1	0 - 20	22	13	53	238	1306	123	181	3	48	56.1	32.7	1.76	-	-
Cobalt	4.4	< 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	20	0 - 10	19	123	251	77	216	211	293	82	59	-	-	-	-	-
Cyanide	3.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	22	0 - 10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.3	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	0 - 1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	1.46	0 - 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	0.022	0 - 0.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	2	0 - 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NRG	0 - 6,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0.36		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0.01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	42	< 0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- **RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1]Area A - Treating Area
[1]Area B - CCA Area
[1]Area C - Creo-Penta Track Area
[1]Area D - Old Ditch Area
[1]Area E - Bulk Storage Area (Creosote Storage Area Only)
[1]Area F - Banding House Area
[1]Area G - Product Storage Area

[2]#1 - Road in Front of Old #5 Pole Machine
[2]#2 - Road in Front of Old #5 Pole Machine
[2]#3 - Road Crossing Separating State Ports & City
[2]#4 - Road Crossing Separating State Ports & City
***Reference 2, p. 50; Reference 70

TABLE 2-3. SURFACE SOIL SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Inorganics	**RG	**Naturally Occurring Levels	[1]Area F-3 6/83-9/83	[1]Area F-4 6/83-9/83	[1]Area F-5 6/83-9/83	[1]Area F-6 6/83-9/83	[1]Area F-7 6/83-9/83	JA-C1 1/7/85	LA-C2 1/7/85	LB-C3 1/7/85	LC-C4 1/7/85	NTA-1 2/26/91	NTA-2 2/26/91	NTA-3 2/26/91	NTA-4 2/26/91	NTA-5 2/26/91	NTA-6 2/26/91	NTA-7 2/26/91
Aluminum	74	7,000 - 15,000	-	-	-	-	-	2,600	4,300	2,100	1,700	-	-	-	-	-	-	-
Antimony	0.12		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	0.1	0.018	0.2	0.8	0.75	10	610	10	20	11	1.8	30	2.8	7.1	25	63
Barium	40	10 - 200	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Beryllium	0.08		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Cadmium	0.1	n/a	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Calcium	NRG	0 - 2,300	-	-	-	-	-	4,000	12,000	6,300	2,000	-	-	-	-	-	-	-
Chromium	1	0 - 20	-	-	-	-	-	ND	390	ND	10	8.4	3.8	15	5.1	4.7	4.3	13
Cobalt	4.4	< 3	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Copper	20	0 - 10	-	-	-	-	-	40	620	30	60	72	11	300	4.5	56	51	240
Cyanide	3.08		-	-	-	-	-	0.88	0.41	0.11	ND	-	-	-	-	-	-	-
Iron	22	0 - 10,000	-	-	-	-	-	4,800	12,000	5,600	6,600	-	-	-	-	-	-	-
Lead	0.3	< 10	-	-	-	-	-	12	150	33	61	-	-	-	-	-	-	-
Magnesium	NRG	0 - 1,500	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Manganese	1.46	0 - 150	-	-	-	-	-	40	100	52	50	-	-	-	-	-	-	-
Mercury	0.022	0 - 0.051	-	-	-	-	-	ND	0.48	ND	0.45	-	-	-	-	-	-	-
Nickel	2	0 - 5	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Potassium	NRG	0 - 6,800	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Selenium	1		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Silver	0.36		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Thallium	0.01		-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Tin	44	-	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	ND	20	ND	ND	-	-	-	-	-	-	-
Zinc	42	< 0	-	-	-	-	-	ND	75	20	87	-	-	-	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- **RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1]Area A - Treating Area
[1]Area B - CCA Area
[1]Area C - Creo-Penta Track Area
[1]Area D - Old Ditch Area
[1]Area E - Bulk Storage Area (Creosote Storage Area Only)
[1]Area F - Banding House Area
[1]Area G - Product Storage Area

[2]#1 - Road in Front of Old #5 Pole Machine
[2]#2 - Road in Front of Old #5 Pole Machine
[2]#3 - Road Crossing Separating State Ports & City
[2]#4 - Road Crossing Separating State Ports & City
**Reference 2, p. 50; Reference 70

TABLE 2-3. SURFACE SOIL SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Inorganics	**RG	**Naturally Occurring Levels	NTA-8 2/26/91	NTA-9 2/26/91	NTB-1 3/1/91	NTB-2 3/1/91	NTB-3 2/28/91	NTB-4 3/1/91	NTB-5 3/1/91	NTB-6 2/28/91	NTB-7 2/28/91	NTB-8 3/1/91	NTB-9 3/1/91	NTB-10 3/1/91	NTB-11 3/1/91	NTB-12 3/1/91	NTB-13 3/1/91	TWS-1A 2/28/91	TWS-2A 2/28/91	TWS-3A 2/28/91
Aluminum	74	7,000 - 15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	0.12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	10	54	7.0	ND	4.8	1.7	1.8	5.0	9.4	5.3	12	4.7	8.1	3.2	13	6.8	6.4	13
Barium	40	10 - 200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	0.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.1	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NRG	0 - 2,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	1	0 - 20	5.9	8.9	8.0	1.8	9.1	2.9	3.2	2.3	2.7	5.6	5.7	2.2	4.6	1.4	22	6.5	8.82	7.0
Cobalt	4.4	< 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	20	0 - 10	7.8	8.8	30	ND	4.3	9.7	3.9	11	2.8	90	130	8.6	81	3.1	20	88	ND	8.2
Cyanide	3.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	22	0 - 10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.3	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	0 - 1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	1.46	0 - 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	0.022	0 - 0.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	2	0 - 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NRG	0 - 6,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0.36		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0.01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	42	< 0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- - Not Analyzed
- **RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1] Area A - Treating Area
[1] Area B - CCA Area
[1] Area C - Creo-Penta Track Area
[1] Area D - Old Ditch Area
[1] Area E - Bulk Storage Area (Creosote Storage Area Only)
[1] Area F - Banding House Area
[1] Area G - Product Storage Area

[2] #1 - Road in Front of Old #5 Pole Machine
[2] #2 - Road in Front of Old #5 Pole Machine
[2] #3 - Road Crossing Separating State Ports & City
[2] #4 - Road Crossing Separating State Ports & City
**Reference 2, p. 50; Reference 70

TABLE 2-3. SURFACE SOIL SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Inorganics	*RG	**Naturally Occurring Levels	TWS-4A 2/28/91	TWS-5A 2/28/91	TWS-6A 2/28/91	TWS-7A 2/27/91	TWS-8A 2/27/91	TWS-9A 2/27/91	TWS-10A 2/27/91	TWS-11A 2/27/91	TWS-12A 2/27/91	TWS-13A 2/27/91	[2]#1 3/12/93	[2]#2 3/12/93	[2]#3 3/12/93	[2]#4 3/12/93	TWSB1A 2/14/96	TWSB2A 2/14/96
Aluminum	74	7,000 - 15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	0.12		-	-	-	-	-	-	-	-	-	-	ND	6.6	ND	ND	-	-
Arsenic	1	0 - 2.6	26	41	8.7	2.7	1.9	ND	1.3	31	ND	1.8	10	2.8	ND	2.9	4.1	1.4
Barium	40	10 - 200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	0.08		-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	-	-
Cadmium	0.1	n/a	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	-	-
Calcium	NRG	0 - 2,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	1	0 - 20	8.4	19	13	5.3	3.4	4.1	2.7	11	2.7	5.2	130	150	16	75	19	2.1
Cobalt	4.4	< 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	20	0 - 10	7.3	71	7.2	3.8	4.4	3.3	17	15	ND	ND	40	46	6.8	17	21	8.2
Cyanide	3.08		-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	-	-
Iron	22	0 - 10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.3	< 10	-	-	-	-	-	-	-	-	-	-	590	510	59	420	-	-
Magnesium	NRG	0 - 1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	1.46	0 - 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	0.022	0 - 0.051	-	-	-	-	-	-	-	-	-	-	ND	0.012	ND	0.018	-	-
Nickel	2	0 - 5	-	-	-	-	-	-	-	-	-	-	17	110	ND	5.4	-	-
Potassium	NRG	0 - 6,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	1		-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	-	-
Silver	0.36		-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0.01		-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	-	-
Tin	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	42	< 0	-	-	-	-	-	-	-	-	-	-	240	310	40	150	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- - Not Analyzed
- *RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1]Area A - Treating Area
[1]Area B - CCA Area
[1]Area C - Creo-Penta Track Area
[1]Area D - Old Ditch Area
[1]Area E - Bulk Storage Area (Creosote Storage Area Only)
[1]Area F - Banding House Area
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[2]#1 - Road in Front of Old #5 Pole Machine
[2]#2 - Road in Front of Old #5 Pole Machine
[2]#3 - Road Crossing Separating State Ports & City
[2]#4 - Road Crossing Separating State Ports & City
**Reference 2, p. 50; Reference 70

TABLE 2-3. SURFACE SOIL SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Inorganics	**RG	**Naturally Occurring Levels	TWSB3A 2/14/96	TWSB4A 2/14/96	TWSB5A 2/14/96	TWSB6A 2/14/96	TWSB7A 2/14/96	TWSB8A 2/14/96	TWSB9A 2/14/96	TWSB10A 2/14/96	TWSB11A 2/14/96	TWSB12A 2/14/96	TWSB13A 2/14/96	TWSB14A 2/14/96	TWSB15A 2/14/96	TWSB15ADUP 2/14/96
Aluminum	74	7,000 - 15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	0.12		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	ND	38	5.7	5.9	ND	ND	16	ND	20	5.3	42	ND	13	14
Barium	40	10 - 200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	0.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.1	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NRG	0 - 2,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	1	0 - 20	1.9	29	5.1	6.1	2.5	2.7	7.2	1.8	5.2	5.0	39	2.0	12	13
Cobalt	4.4	< 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	20	0 - 10	ND	47	27	53	ND	ND	28	ND	10	6.9	110	ND	48	60
Cyanide	3.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	22	0 - 10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.3	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	0 - 1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	1.46	0 - 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	0.022	0 - 0.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	2	0 - 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NRG	0 - 6,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0.36		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	0.01		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	42	< 0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1] Area A - Treating Area
[1] Area B - CCA Area
[1] Area C - Creo-Penta Track Area
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[1] Area E - Bulk Storage Area (Creosote Storage Area Only)
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[2] #1 - Road in Front of Old #5 Pole Machine
[2] #2 - Road in Front of Old #5 Pole Machine
[2] #3 - Road Crossing Separating State Ports & City
[2] #4 - Road Crossing Separating State Ports & City
**Reference 2, p. 50; Reference 70

TABLE 2-3. SURFACE SOIL SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Inorganics	**RG	***Naturally Occurring Levels	PDA1A 2/14/96	PDA2A 2/14/96	PDA3A 2/14/96	PDA4A 2/14/96	PDA5A 2/14/96	PDA6A 2/14/96	PDA7A 2/14/96	PDA8A 2/14/96	PDA9A 2/14/96	PDA10A 2/14/96	PDA11A 2/14/96	*SS-01 10/4/96	SS-02 10/4/96	SS-03 10/4/96	SS-04 10/4/96	SS-05 10/4/96	SS-06 10/4/96
Aluminum	74	7,000 - 15,000	-	-	-	-	-	-	-	-	-	-	-	990	2,400	4,700	710	710	1,200
Antimony	0.12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	1,300	5.6	27	3.2	3.1	67	74	45	2.5	ND	ND	1.8J	56J	5.4	ND	2.2	210
Barium	40	10 - 200	-	-	-	-	-	-	-	-	-	-	-	8.8	27	43	13	4.6	28
Beryllium	0.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.1	n/a	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND
Calcium	NRG	0 - 2,300	-	-	-	-	-	-	-	-	-	-	-	1,200J	580J	4,800	260J	230	22,000
Chromium	1	0 - 20	1,200	9.3	37	6.9	9.0	56	84	38	5.3	1.5	2.7	3.6	3.5J	10.9	2.2J	2.2	130J
Cobalt	4.4	< 3	-	-	-	-	-	-	-	-	-	-	-	ND	1.4J	1.8J	ND	ND	1.6J
Copper	20	0 - 10	1,600	11	32	15	11	150	89	88	19	ND	ND	19	24	24	5.7J	14	170J
Cyanide	3.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	22	0 - 10,000	-	-	-	-	-	-	-	-	-	-	-	2,000J	5,000J	6,600	2,300J	1,300	11,000
Lead	0.3	< 10	-	-	-	-	-	-	-	-	-	-	-	25J	54J	100	5.6J	2.6	19J
Magnesium	NRG	0 - 1,500	-	-	-	-	-	-	-	-	-	-	-	200	220	640	84	110	480J
Manganese	1.46	0 - 150	-	-	-	-	-	-	-	-	-	-	-	11	60	65	21	8.8J	110J
Mercury	0.022	0 - 0.051	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	0.17
Nickel	2	0 - 5	-	-	-	-	-	-	-	-	-	-	-	1.3J	3.3J	ND	ND	ND	ND
Potassium	NRG	0 - 6,800	-	-	-	-	-	-	-	-	-	-	-	220	170	300	120	ND	150
Selenium	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0.36		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	-	-	-	-	-	-	26	16J	270	13J	87	62
Thallium	0.01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	-	-	-	-	-	-	4.3J	4.7J	12	3.5J	2.4J	4.1J
Zinc	42	< 0	-	-	-	-	-	-	-	-	-	-	-	11	18	100	40	13	57

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- **RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1]Area A - Treating Area
[1]Area B - CCA Area
[1]Area C - Creo-Penta Track Area
[1]Area D - Old Ditch Area
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[2]#2 - Road in Front of Old #5 Pole Machine
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[2]#4 - Road Crossing Separating State Ports & City
***Reference 2, p. 50; Reference 70

TABLE 2-3. SURFACE SOIL SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Inorganics	**RG	***Naturally Occurring Levels	SS-07 10/4/96	SS-08 10/4/96	SS-09 10/4/96	SS-10 10/4/96	SS-11 10/4/96	SS-12 10/4/96	SS-13 10/4/96	SS-14 10/4/96	SS-15 10/4/96	SS-16 10/4/96	SS-17 10/4/96	SS-18 10/4/96	SS-19 10/4/96	SS-20 10/4/96	SS-21 10/4/96
Aluminum	74	7,000 - 15,000	1,200	1,900	1,500	1,900	2,400	2,300	2,000	3,700	640	310	650	1,200	3,400	1,000	2,100
Antimony	0.12		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	16	27	ND	18	ND	12	3.1	5	ND	ND	ND	ND	3J	83	43
Barium	40	10 - 200	22	21	3.2	12	17	11	3	15	23	2	4.1	3	7.7	4.5	7.2
Beryllium	0.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.1	n/a	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1J	ND
Calcium	NRG	0 - 2,300	720	15,000	5,200	710	640	7,700	280	1,200	33J	ND	ND	15J	37J	130,000	9,700
Chromium	1	0 - 20	9.2	22	2.8	8.7	6.3	18	4.1	7.8J	2.9	1.7J	2.2J	4	9.2	61	19
Cobalt	4.4	< 3	ND	0.80J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8J	ND
Copper	20	0 - 10	16	55	ND	16	ND	11	ND	35J	ND	ND	ND	ND	ND	110	29
Cyanide	3.08		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	22	0 - 10,000	2,500	3,500	1,300	3,100	1,100	2,400	1,600	4,600	1,100J	650	1,300	2,200J	4,700J	20,000	1,300
Lead	0.3	< 10	37	19	2.7	9.9	24	45	3.2	16J	2.6J	2.8	6.5	5.5J	6.1J	6.1	8
Magnesium	NRG	0 - 1,500	140	610	170	140	91	260	88	370J	96	ND	82	170	430	4,700	290
Manganese	1.46	0 - 150	40J	120	11J	28J	6.4J	34	8	53J	6.9	3.8J	4.9J	9.2	14	230	13J
Mercury	0.022	0 - 0.051	0.12	0.22	ND	0.15	ND	ND	ND	0.77	ND	ND	ND	ND	ND	ND	ND
Nickel	2	0 - 5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6J	ND
Potassium	NRG	0 - 6,800	ND	310	ND	ND	ND	240J	ND	230	180	ND	ND	210	600	280	ND
Selenium	1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	0.36		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	34	230	110	120	ND	100	ND	46	ND	ND	ND	ND	ND	260	92
Thallium	0.01		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	4.6J	5.7J	2.4J	5.9J	6.2J	5.4J	3.6J	9J	3.6J	ND	2.6J	6.3J	14	19	3.6J
Zinc	42	< 0	32	43	6.7	14	57	32	7	37	1.8J	5.8	6.9	5.6	8.3	11	12

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- - Not Analyzed
- **RG Shaded Cells Exceed Preliminary Soil Remediation Goal

[1]Area A - Treating Area
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[2]#3 - Road Crossing Separating State Ports & City
[2]#4 - Road Crossing Separating State Ports & City
***Reference 2, p. 50; Reference 70

TABLE 2-4

TABLE 2-4. SURFACE SOIL SAMPLES - PESTICIDES AND MISCELLANEOUS ANALYSIS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters-(mg/kg) Pesticides/PCB-Compounds	**RG	JA-C1 1/7/85	LA-C2 1/7/85	LB-C3 1/7/85	LC-C4 1/7/85	[1]#1 3/12/93	[1]#2 3/12/93	[1]#3 3/12/93	[1]#4 3/12/93	PDA12C 2/15/96	PDA13C 2/15/96	NTB3 2/15/96	NTB4 2/15/96	TWS10 2/15/96	TWS14 2/15/96	*SS-01 10/4/96	SS-02 10/4/96	SS-03 10/4/96
1-Hydroxychlordene-/2		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDD-(P,P'-DDD)	0.0056	ND	ND	ND	ND	ND	0.014	ND	ND	-	-	-	-	-	-	-	-	-
4,4'-DDE-(P,P'-DDE)	0.004	ND	ND	ND	ND	0.024	0.029	0.0039	0.022	-	-	-	-	-	-	ND	ND	0.015J
4,4'-DDT-(P,P'-DDT)	0.004	ND	ND	ND	ND	0.079	0.16	0.030	0.10	-	-	-	-	-	-	ND	ND	0.010J
Aldrin	0.0003042	ND	ND	ND	ND	ND	ND	ND	0.0030	-	-	-	-	-	-	-	-	-
Alpha-BHC		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Alpha-Chlordane-/2		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordene-/2		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Beta-BHC		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Chlordane-(Tech,-Mixture)-/1		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Chlordene		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-Nonachlor-/2		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Delta-BHC		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Dieldrin		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Endosulfan-I-(Alpha)	0.44	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	ND	ND	ND
Endosulfan-II-(Beta)		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Endosulfan-Sulfate		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Endrin		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	ND	ND	ND
Endrin-Aldehyde		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin-Ketone		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-BHC-(Lindane)	0.00104	ND	ND	ND	ND	ND	ND	ND	0.0023	-	-	-	-	-	-	-	-	-
Gamma-Chlordane-/2		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-Chlordene-/2		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	0.00016	ND	ND	ND	ND	ND	ND	ND	0.0019	-	-	-	-	-	-	-	-	-
Heptachlor-Epoxide		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Methoxychlor		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1016-(Aroclor-1016)		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
PCB-1221-(Aroclor-1221)		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
PCB-1232-(Aroclor-1232)		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
PCB-1242-(Aroclor-1242)		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
PCB-1248-(Aroclor-1248)		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
PCB-1254-(Aroclor-1254)		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
PCB-1260-(Aroclor-1260)	0.01	ND	ND	ND	ND	ND	0.060	ND	0.11	-	-	-	-	-	-	-	-	-
Toxaphene		ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-
Trans-Nonachlor-/2		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous-Compounds																		
Total-Organic-Carbon		-	-	-	-	-	-	-	-	12,000	29,000	62,000	43,000	13,000	5,800	-	-	-

Notes:

* Background Location

J Estimated Value

N *Presumptive Evidence of Presence of Material.*

**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

ND Not Detected

\- Not Analyzed

[1]#1 - Road in Front of Old #5 Pole Machine

[1]#2 - Road in Front of Old #5 Pole Machine

[1]#3 - Road Crossing Seperating State Ports & City

[1]*#4 - Road Crossing Seperating State Ports & City*

TABLE 2-4. SURFACE SOIL SAMPLES - PESTICIDES AND MISCELLANEOUS ANALYSIS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters-(mg/kg) Pesticides/PCB-Compounds	**RG	SS-04 10/4/96	SS-05 10/4/96	SS-06 10/4/96	SS-07 10/4/96	SS-08 10/4/96	SS-09 10/4/96	SS-10 10/4/96	SS-11 10/4/96	SS-12 10/4/96	SS-13 10/4/96	SS-14 10/4/96	SS-15 10/4/96	SS-16 10/4/96	SS-17 10/4/96	SS-18 10/4/96	SS-19 10/4/96	SS-20 10/4/96	SS-21 10/4/96
1-Hydroxychlordene-/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDD-(P,P'-DDD)	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDE-(P,P'-DDE)	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4'-DDT-(P,P'-DDT)	0.004	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	0.0003042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-BHC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordane-/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordene-/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beta-BHC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane-(Tech,-Mixture)-/1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlordene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-Nonachlor-/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delta-BHC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan-I-(Alpha)	0.44	ND	0.075J	ND	0.130N	0.078J	ND	ND	ND	0.0060N	ND	ND	ND	ND	ND	ND	ND	0.0052N	0.016
Endosulfan-II-(Beta)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan-Sulfate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0150N	ND	ND	ND	ND	ND	ND	ND
Endrin-Aldehyde		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin-Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-BHC-(Lindane)	0.00104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-Chlordane-/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-Chlordene-/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	0.00016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor-Epoxide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1016-(Aroclor-1016)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1221-(Aroclor-1221)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1232-(Aroclor-1232)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1242-(Aroclor-1242)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1248-(Aroclor-1248)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1254-(Aroclor-1254)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1260-(Aroclor-1260)	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toxaphene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-Nonachlor-/2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous-Compounds																			
Total-Organic-Carbon		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of M

**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

ND Not Detected

\- Not Analyzed

[1] #1 - Road in Front of Old #5 Pole Machine

[1] #2 - Road in Front of Old #5 Pole Machine

[1] #3 - Road Crossing Seperating State Ports & City

[1] #4 - Road Crossing Seperating State Ports & City

TABLE 2-5

TABLE 2-5. SURFACE SOIL SAMPLES - DIOXINS AND FURANS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY
WILMINGTON, NORTH CAROLINA FACILITY

Parameters (ug/kg)	**RG	LF1A	LF2A	LF1A	LF2A	*SS-02	SS-06	SS-13	SS-14	SS-15	SS-17	SS-19
Dioxins		10/9/90	10/9/90	2/15/96	2/15/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96
1,2,3,4,6,7,8-Heptachlorodibenzodioxin		65.5	98.7	55.750	90.080	ND	84	7.9J	76	ND	24	0.460
1,2,3,4,7,8-Hexachlorodibenzodioxin		0.10	0.18	0.191	0.263	ND	1.1	0.044J	0.250	ND	0.046J	0.0070
1,2,3,6,7,8-Hexachlorodibenzodioxin		1.3	1.8	1.600	1.910	ND	2.5	0.130	1.7	ND	0.350	0.012
1,2,3,7,8,9-Hexachlorodibenzodioxin		0.22	0.89	0.526	0.789	0.0013J	1.8	0.130	0.660	ND	0.120	0.014
1,2,3,7,8-Pentachlorodibenzodioxin		0.03	0.05	0.0422	0.0552	0.00076J	0.360	0.012J	0.040	ND	ND	0.0026J
2,3,7,8-Tetrachlorodibenzodioxin		0.004	0.008	0.0024	0.0042	ND	0.023	ND	ND	ND	ND	0.00090J
Heptachlorodibenzodioxins (total)		461	573	290.890	298.650	0.080J	180J	33J	460J	0.047J	110J	1.2J
Hexachlorodibenzodioxins (total)		16.4	22.5	18.060	26.080	0.018J	22J	2.5J	28J	0.0048J	4.6J	0.130J
Octachlorodibenzodioxin (total)		621	932	583.460	496.210	ND	1,000	100	940	ND	300	4.4J
Pentachlorodibenzodioxins (total)		0.48	0.65	0.736	0.879	0.0041J	4.3J	0.012J	0.750J	ND	0.016J	0.014J
Tetrachlorodibenzodioxins (total)		0.14	0.17	0.061	0.0918	0.0028J	1.2J	ND	0.082J	ND	ND	0.0023J
Furans												
1,2,3,4,6,7,8-Heptachlorodibenzofuran		59.5	66	56.260	51.580	0.042	12	3	94	0.410	3.1	0.160
1,2,3,4,7,8,9-Heptachlorodibenzofuran		0.77	0.96	1.100	1.080	0.0010J	0.850	0.068J	1.1	0.0046J	0.099J	ND
1,2,3,4,7,8-Hexachlorodibenzofuran		0.71	0.76	0.956	1.160	-	-	-	-	-	-	-
1,2,3,6,7,8-Hexachlorodibenzofuran		0.24	0.21	0.206	0.217	0.0040J	0.550	ND	0.390	0.0020J	ND	0.0021J
1,2,3,7,8,9-Hexachlorodibenzofuran		0.04	0.05	0.0448	0.0625	-	-	-	-	-	-	-
1,2,3,7,8-Pentachlorodibenzofuran		0.06	0.06	0.0552	0.0633	-	-	-	-	-	-	-
2,3,4,6,7,8-Hexachlorodibenzofuran		0.16	0.14	0.469	0.171	0.017	1.1	ND	0.580	0.0026J	ND	ND
2,3,4,7,8-Pentachlorodibenzofuran		0.06	0.06	0.0511	0.0531	0.0032J	0.170	ND	0.066	ND	ND	0.0012J
2,3,7,8-Tetrachlorodibenzofuran		0.02	0.02	0.0113	0.0145	ND	0.100J	ND	0.016J	ND	ND	ND
Heptachlorodibenzofurans (total)		147	164	133.590	120.130	0.043J	13J	2.6J	95J	0.420J	3.2J	0.160J
Hexachlorodibenzofurans (total)		31.4	34.4	31.580	38.630	0.230J	12J	1.1J	15J	0.180J	1.8J	0.077J
Octachlorodibenzofurans (total)		63.2	83.3	154.750	155.250	0.028	52	5.0	75	0.210	11	0.250
Pentachlorodibenzofuran (total)		0.92	0.87	1.110	1.050	0.370J	2.8J	0.058J	1.3J	0.0049J	0.100J	0.019J
Tetrachlorodibenzofurans (total)		0.09	0.10	0.0689	0.0965	0.046J	0.470J	ND	0.071J	ND	ND	ND
TEQ* (Toxicity Equivalents Value)**	**0.0000044**	**2.27**	**3.14**	**2.300**	**2.600**	**0.0047J**	**3.0**	**0.250**	**3.1**	**0.0048J**	**0.640**	**0.017J**

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Material.

ND Not Detected

\- Not Analyzed

**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

*** Amount of toxic dioxin and furan concentrations is usually expressed at toxic equivalents (TEQ) of 2,3,7,8-tetrachlorodibenzodioxin (TCDD) present.

TABLE 2-6

TABLE 2-6. TCLP SAMPLES - INORGANICS, VOLATILES AND SEMI-VOLATILES SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/L)	DP-1	BG-1	TP-1
Inorganics	1/17/91	1/17/91	1/17/91
Arsenic (TCLP)	ND	ND	ND
Chromium (TCLP)	3.7(3.4)	4.1(3.7)	ND
Lead (TCLP)	ND	ND	ND
Mercury (TCLP)	ND	ND	ND
Volatiles			
Benzene (TCLP)	ND	ND	ND
Methyl Ethyl Ketone (TCLP)	ND	ND	ND
Semi-Volatiles			
2,4,5-Trichlorophenol (TCLP)	ND	ND	ND
2,4,6-Trichlorophenol (TCLP)	ND	ND	ND
Cresol (ortho) - TCLP	ND	ND	ND
Cresol m & p (TCLP)	ND	ND	ND
Hexachlorobenzene (TCLP)	ND	ND	ND
Pentachlorophenol (TCLP)	ND	ND	ND
Pyridine (TCLP)	ND	ND	ND
Total Cresol (TCLP)	ND	ND	ND

Notes:

DP-1 Drip Pad Area
BG-1 CCA Area
TP-1 Tank Pad Area
TCLP results which are above quantitation limits have been corrected for analytical bias per instructions in Section 8.2.5 of Method 1311 (Fed. Reg. June 29, 1990). The first number reported is the corrected TCLP value and the value in parenthesis is the uncorrected analytical result.

TABLE 3-1

TABLE 3-1. SUBSURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Extractable Organics	*RG	[1]SWP-2 4/30/82	[1]SWP-4 4/30/82	[1]NCDHR-2 4/30/82	[1]NCDHR-4 4/30/82	[2]AREA B-8 6/83-9/83	TWS-1B 2/28/91	TWS-2B 2/28/91	TWS-3B 2/28/91	TWS-4B 2/28/91	TWS-5B 2/28/91	TWS-6B 2/28/91	TWS-7B 2/28/91	TWS-8B 2/28/91	TWS-9B 2/28/91	TWS-10B 2/28/91	TWS-11B 2/28/91	TWS-12B 2/28/91	TWS-13B 2/28/91	TWSB1B 2/14/96	TWSB2B 2/14/96	TWSB3B 2/14/96	TWSB4B 2/14/96	TWSB5B 2/14/96	TWSB6B 2/14/96	TWSB7B 2/14/96	TWSB8B 2/14/96	TWSB9B 2/14/96	TWSB10B 2/14/96	TWSB11B 2/14/96	TWSB12B 2/14/96	TWSB13B 2/14/96	TWSB14B 2/14/96	TWSB15B 2/14/96
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	0.56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol		72	ND	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	1.6	-	-	-	-	-	ND	ND	47	ND	ND	ND	ND	ND	ND	2000	ND	ND	ND	ND	ND	ND	75	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthopyridine	0.33	ND	ND	70	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	4.2	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkanes	NRG	190	17	200	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	-	-	-	-	-	ND	ND	51	ND	ND	ND	ND	ND	ND	2200	ND	ND	ND	ND	ND	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo (g,h,i) Perylene	4.2	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	0.33	ND	14	-	-	-	ND	0.66	17	ND	ND	ND	ND	ND	ND	800	ND	12	ND	ND	ND	ND	73	15	5.5	ND	ND	ND	ND	ND	ND	0.57	1.8	4.7
Benzo(a)pyrene	0.33	ND	ND	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	290	ND	ND	ND	ND	ND	ND	57	10	6.0	ND	ND	ND	ND	ND	ND	0.60	1.7	4.6
Benzo(b)fluoranthene	0.33	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	99	21	8.7	ND	ND	ND	ND	ND	ND	1.4	2.2	7.9
Benzo(b,k)fluoranthene	0.33	ND	ND	-	-	-	ND	ND	20	ND	ND	ND	ND	ND	ND	690	1.0	30	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)fluoranthene	0.33	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	36	7.3	3.2	ND	ND	ND	ND	ND	ND	0.78	0.69	3.1
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not A)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	0.33	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carboxylic Acids		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.33	ND	11	ND	ND	-	ND	0.73	13	ND	ND	ND	ND	ND	ND	740	0.49	19	ND	ND	ND	ND	92	16	5.2	ND	ND	ND	ND	ND	ND	1.1	2.3	5.7
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentapyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	0.33	ND	ND	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	130	28	-	-	-	ND	1.0	150	0.95	ND	ND	ND	ND	ND	3700	0.43	42	ND	ND	ND	ND	240	22	7.4	ND	ND	0.65	0.67	ND	ND	0.94	1.9	8.8
Fluorene	5.6	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexahydrohydroxytrimethyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethyl) Phenanthrenone		-	-	-	-																												
Indeno(1,2,3-cd)pyrene	0.33	ND	ND	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	88	ND	ND	ND	ND	ND	ND	ND	ND	3.3	ND	ND	ND	ND	ND	ND	ND	0.74	2.6
Indenosoquinoline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl (Methylethyl) Phenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbiphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylchrysene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenathrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	ND	ND	100	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthochrysene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.7	250	ND	ND	ND	0.91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	4.2	ND	ND	-	-	4.8	ND	ND	220	ND	ND	ND	ND	ND	ND	4000	ND	ND	ND	ND	ND	ND	280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9
Phenol		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	4.2	94	21	81	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenols	1.7	-	-	-	-	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetramethylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanillin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- *RG Shaded Cells Exceed Preliminary Soil Remediation Goal
- NRG No Remediation Goal has been Determined
- [1] SWP-2, SWP-4, NCDHR-2, & NCDHR-4 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area
- [2] Area B Sample Is From CCA Treatment Area

TABLE 3-1. SUBSURFACE SOIL SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg) Extractable Organics	*RG	PDA1B 2/14/96	PDA2B 2/14/96	PDA3B 2/14/96	PDA4B 2/14/96	PDA5B 2/14/96	PDA6B 2/14/96	PDA7B 2/14/96	PDA8B 2/14/96	PDA9B 2/14/96	PDA10B 2/14/96	PDA11B 2/14/96	SB-01[1] 10/4/96	SB-02 10/4/96	SB-03 10/4/96	SB-04 10/4/96	SB-05 10/4/96	SB-06 10/4/96	SB-07 10/4/96	SB-08 10/4/96	SB-09 10/4/96	SB-10 10/4/96	SB-11 10/4/96	SB-12 10/4/96	SB-13 10/4/96	SB-14 10/4/96	SB-15 10/4/96	SB-16 10/4/96	SB-17 10/4/96	SB-18 10/4/96	SB-19 10/4/96	SB-20 10/4/96	SB-21 10/4/96
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8JN	-	0.300JN	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	0.56	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	7.2	2400	0.042J	0.051J	240J	0.480J	0.450	ND	ND	ND	ND	ND	ND	ND	0.065J
4-Chloro-3-methylphenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1.6	ND	ND	ND	1.4	ND	ND	ND	ND	2.0	ND	1400	ND	ND	ND	ND	9.4J	0.360J	20	4900	0.059J	0.053J	270J	9.3	0.660	ND	ND	ND	ND	ND	ND	ND	0.069J
Acenaphthopyridine	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5J	ND	0.062J	ND	2.3J	0.210J	ND	0.042	ND	ND	ND	ND	ND	0.071J	0.058J
Alkanes	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	6J	-	-	-	-	-	1J	1J	-	-	-	-	-	-	-	-	-	-	-
Anthracene	42	ND	ND	ND	0.47	28	ND	0.84	1.8	5.5	ND	3400	ND	ND	0.056J	0.043J	21J	0.058J	5.8	4600	0.091J	ND	32J	1.9	0.055J	0.160J	ND	ND	0.037J	ND	ND	0.180J	0.130J
Anthracenedione		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.800JN
Benzanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN
Benzo (g,h,i) Perylene	4.2	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	0.077J	ND	0.042J	16	0.042J	0.450J	0.072J	3.3J	0.790	ND	0.110J	ND	ND	0.120J	ND	ND	0.540	0.470
Benzo(a)anthracene	0.33	0.71	0.51	1.3	0.64	4.2	ND	2.8	4.9	2.8	ND	ND	ND	ND	0.057J	ND	29J	0.042J	6.7	1400	0.530	0.120J	26J	1.900	0.037J	0.200J	ND	ND	0.190J	ND	ND	0.510	0.410
Benzo(a)pyrene	0.33	0.78	0.47	1.1	0.53	2.9	ND	1.2	4.2	6.9	ND	ND	ND	ND	ND	0.100J	ND	0.051J	26	370J	0.580	0.120J	9.3J	1.500	0.031J	0.150J	ND	ND	0.140J	ND	0.041J	0.480	0.540
Benzo(b)fluoranthene	0.33	2.2	1.3	2.5	1.7	12	ND	3.2	6.2	12	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)fluoranthene	0.33	-	-	-	-	-	-	-	-	-	-	-	0.044J	ND	0.110J	0.160J	24J	0.077J	55	1,000J	0.960J	0.220J	21J	3.3	0.120J	0.230J	0.052J	ND	0.420J	ND	0.052J	0.790J	1.6
Benzo(k)fluoranthene	0.33	0.74	0.44	1.0	ND	7.1	ND	1.2	2.8	3.3	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100JN	-	3JN	-	-	-	-	-	-	-	-	-	-	-	-	-	0.300JN
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20JN	-	4JN	400JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10JN	-	-	-	-	-	-	-	-	-	0.200JN
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	0.080JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-
Benzopyrene (not A)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500JN	-	-	5JN	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.33	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	930	ND	ND	ND	ND	ND	ND	4,400J	1,200J	ND	ND	20J	0.190J	ND	0.039J	ND	ND	ND	ND	ND	ND	0.110J
Carboxylic Acids		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2J	-	-	-	-	-	-	-	-	-
Chrysene	0.33	1.3	0.93	2.4	1.0	7.9	ND	2.9	4.3	6.2	ND	ND	ND	ND	0.081J	0.160J	35J	0.078J	19	1400	0.740	0.150J	25J	2.700	0.120J	0.270J	ND	ND	0.260J	ND	0.041J	0.680	0.850
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10JN	500JN	-	-	3JN	-	-	-	-	-	-	-	-	-	-
Cyclopentapyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN
Dibenzo(a,h)anthracene	0.33	ND	ND	ND	ND	ND	ND	ND	0.60	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	0.33	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	69	0.082J	15	4000	ND	ND	82J	2.2	0.085J	ND	ND	ND	ND	ND	ND	ND	0.079J
Dibenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2JN	400JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2JN	-	-	-	-	0.400JN	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7JN	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3000JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	5.6	1.3	1.0	7.0	1.9	2.8	ND	3.6	4.9	12	ND	1800	ND	ND	0.220J	0.180J	210	0.077J	11	7300	0.670	0.130J	250J	8.2	0.160J	0.290J	0.085J	ND	0.390	ND	ND	0.640	0.850
Fluorene	5.6	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	150	0.190J	18	7000	0.069J	ND	170J	4.2	0.170J	ND	ND	ND	ND	ND	ND	ND	0.100J
Hexahydrohydroxytrimethyl (Methylethyl) Phenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.090JN	-	-
Indeno(1,2,3-cd)pyrene	0.33	0.61	ND	ND	ND	5.5	ND	0.77	2.4	3.9	ND	ND	ND	ND	ND	0.088J	ND	ND	16	84J	0.0350J	0.057J	3.3J	0.630	ND	0.094J	ND	ND	0.099J	ND	ND	0.420	0.440
Indenosoquinoline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl (Methylethyl) Phenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	0.400JN	-	-	-	-	-	-	-	-	-
Methylbiphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	1000JN	-	-	5JN	-	-	-	-	-	-	-	-	-	-
Methylchrysene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30JN	-	1JN	700JN	-	-	5JN	0.300JN	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4JN	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3JN	1000JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenathrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10JN	-	-	-	-	-	-	-	-	-	0.090JN
Methylpyrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10JN	1000JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.42	ND	ND	ND	0.86	ND	ND	ND	ND	2.3	ND	2100	ND	ND	ND	ND	ND	ND	11	2900	0.054J	0.130J	360J	1.1	ND	ND	ND	ND	ND	ND	ND	ND	0.150J
Naphthochrysene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perylene	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100J	-	-	2JN	-	-	-	6JN	-	-	-	-	-	0.100JN	-	-	0.100JN	-
Phenanthrene	4.2	ND	ND	ND	1.8	2.1	ND	0.39	2.6	5.0	ND	4400	ND	ND	0.120J	0.100J	430	0.067J	26	15000	0.370J	0.110J	470J	7.1	0.083J	0.110J	ND	ND	0.060J	ND	ND	0.300J	0.360J
Phenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	4.2	-	-	-	-	-	-	-	-	-	-	-	0.049J	ND	0.210J	0.190J	97J	0.071J	23J	4600	0.930J	0.240J	80J	4.9J	0.097J	0.320J	0.064J	ND	0.350J	ND	ND	0.800J	0.990J
Tetrachlorophenols	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetramethylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	6JN	-	-	-	-	-	-	-	-	0.200JN	-	-	-	-	-	-	0.400JN	-
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanillin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN	-	-	-	-	-	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- *RG Shaded Cells Exceed Preliminary Soil Remediation Goal
- NRG No Remediation Goal has been Determined
- [1] SWP-2, SWP-4, NCDHR-2, & NCDHR-4 are Split Samples from the Creosote and Pentachlorophenol Drip Track Area
- [2] Area B Sample Is From CCA Treatment Area

TABLE 3-2

TABLE 3-2. SUBSURFACE SOIL SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg)	*RG	TWS-1B	TWS-2B	TWS-3B	TWS-4B	TWS-5B	TWS-6B	TWS-7B	TWS-8B	TWS-9B	TWS-10B	TWS-11B	TWS-12B	TWS-13B	TWSB1B	TWSB2B	TWSB3B	TWSB4B	TWSB5B	TWSB6B	TWSB7B	TWSB8B	TWSB9B	TWSB10B	TWSB11B	TWSB12B	TWSB13B	TWSB14B	TWSB15B
Purgeable Organics		2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/28/91	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96
1,1,1-Trichloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromomethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Branched Alkane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cyclic Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dihydrodimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylidene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethemylbenzaldehyde		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Benzene	0.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethyl Benzene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethynylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorotrichloromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M/P-Xylene		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.021	ND	ND	0.0074	ND	ND	ND	ND	ND	ND	ND	ND	ND
(Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylphenyl) Ethanone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl (Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl (Methylethyl) Benzene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl (Propenyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Butyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Isobutyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl-T-Butyl Ether (MTBE)		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Xylene		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenylpropenal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pinene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	10.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-1,2-Dichloroethylene		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylbenzene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride		-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- *RG Shaded Cells Exceed Preliminary Soil Remediation Goal

TABLE 3-2. SUBSURFACE SOIL SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/kg)	*RG	PDA1B	PDA2B	PDA3B	PDA4B	PDA5B	PDA6B	PDA7B	PDA8B	PDA9B	PDA10B	PDA11B	SB-01*	SB-02	SB-03	SB-04	SB-05	SB-06	SB-07	SB-08	SB-09	SB-10	SB-11	SB-12	SB-13	SB-14	SB-15	SB-16	SB-17	SB-18	SB-19	SB-20	SB-21
Purgeable Organics		2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	2/14/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96	10/4/96
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1J	-	-	-	-	-	-	-	-	-	-
Benzene	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.078J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Branched Alkane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.200J	-	-	-	-	-	-	-	-	-	-
Bromodichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclic Alkanes		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.400J	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrodimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.040JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylidene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.400JN	-	-	-	-	-	0.030JN	-	-	-	-	-	-	-	-
Dihydromethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethemylbenzaldehyde		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.030JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30JN	-	-	-	-	-	-	-	-	-	-
Ethyl Benzene	0.58	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND	ND	ND	0.021	0.530J	ND	ND	0.510	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020JN	0.500JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethyl Benzene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.080JN	-	-	-	3JN	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethynylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorotrichloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.030JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M/P-Xylene		ND	ND	ND	ND	ND	ND	0.0088	ND	0.0064	0.0081	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.010JN	-	-	-	0.700JN	-	-	-	-	-	-	-	-	-	-
(Methylphenyl) Ethanone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.030JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl (Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.040JN	0.800JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl (Methylethyl) Benzene (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2JN	-	-	-	-	-	-	-	-	-	-
Methyl (Propenyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2JN	-	-	-	-	-	-	-	-	-	-
Methyl Butyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	3.4	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.044J	ND	0.030J	ND	0.019J	0.071J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.700JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl-T-Butyl Ether (MTBE)		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylpropenal		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN	-	-	-	4JN	-	-	-	-	-	-	-	-	-	-
Pinene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.550J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	10.6	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	0.047	2.3J	ND	ND	0.910	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.200JN	6JN	-	-	5JN	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- *RG Shaded Cells Exceed Preliminary Soil Remediation Goal

TABLE 3-3

TABLE 3-3. SUBSURFACE SOIL SAMPLES - INORGANICS AND PESTICIDE/PCBs
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Inorganics	**RG	***Naturally Occurring Levels	[1]Area B-4 6/83-9/83	[1]Area B-5 6/83-9/83	[1]Area B-6 6/83-9/83	[1]Area B-7 6/83-9/83	TWS-1B 2/28/91	TWS-2B 2/28/91	TWS-3B 2/28/91	TWS-4B 2/28/91	TWS-5B 2/28/91	TWS-6B 2/28/91	TWS-7B 2/28/91	TWS-8B 2/28/91	TWS-9B 2/28/91	TWS-10B 2/28/91	TWS-11B 2/28/91	TWS-12B 2/28/91	TWS-13B 2/28/91	TWSB1B 2/14/96	TWSB2B 2/14/96	TWSB3B 2/14/96
Aluminum	74	7,000 - 15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	24	2	85	24	2.0	3.5	4.3	13	1.6	6.1	ND	ND	ND	6.1	2.2	1.6	ND	ND	ND	ND
Barium	40	10 - 200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.1	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NRG	0 - 2,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	1	0 - 20	ND	8	66.9	ND	4.8	6.1	3.8	29	4.1	27	3.2	1.2	2.2	4.2	3.7	6.0	1.8	1.9	1.3	13
Cobalt	4.4	< 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	20	0 - 10	-	-	-	-	12	ND	ND	16	ND	3.9	ND	ND	4.4	110	ND	4.2	ND	ND	ND	16
Cyanide	3.08	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	22	0 - 10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.3	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	0 - 1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	1.46	0 - 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	0.022	0 - 0.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	2	0 - 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NRG	0 - 6,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	42	< 0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pesticides/PCBs																						
4,4' -DDD (P,P' -DDD)	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4' -DDE (P,P' -DDE)	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4' -DDT (P,P' -DDT)	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordane/2	0.038	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin	0.00084	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan I (Alpha)	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Material.

ND Not Detected

\- Not Analyzed

**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

NRG No Remediation Goal has been Determined

[1] Area B Sample is From CCA Treatment Area

*** Hanford T. Shacklette and Josephine G. Boerngen, U.S. Geological Survey, Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States. U.S. Geological Survey Paper 1270, Washington, D.C.: GPO, 1984.

TABLE 3-3. SUBSURFACE SOIL SAMPLES - INORGANICS AND PESTICIDE/PCBs
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Inorganics	**RG	***Naturally Occurring Levels	TWSB4B 2/14/96	TWSB5B 2/14/96	TWSB6B 2/14/96	TWSB7B 2/14/96	TWSB8B 2/14/96	TWSB9B 2/14/96	TWSB10B 2/14/96	TWSB11B 2/14/96	TWSB12B 2/14/96	TWSB13B 2/14/96	TWSB14B 2/14/96	TWSB15B 2/14/96	PDA1B 2/14/96	PDA2B 2/14/96	PDA3B 2/14/96	PDA4B 2/14/96	PDA5B 2/14/96	PDA6B 2/14/96	PDA7B 2/14/96	PDA8B 2/14/96	PDA9B 2/14/96	PDA10B 2/14/96	PDA11B 2/14/96
Aluminum	74	7,000 - 15,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	1	0 - 2.6	21	1.2	5.3	ND	ND	6.5	ND	5.7	3.2	2.9	ND	3.9	110	ND	20	8.2	10	4.0	74	6.6	2.2	ND	2.0
Barium	40	10 - 200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.1	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NRG	0 - 2,300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	1	0 - 20	21	2.1	5.2	1.1	4.2	3.0	3.7	1.7	2.1	5.1	2.4	4.5	380	2.5	25	6.9	32	10	80	14	5.6	1.5	4.5
Cobalt	4.4	< 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	20	0 - 10	58	ND	12	ND	ND	4.8	ND	ND	ND	80	ND	30	120	3.1	14	57	38	9.2	110	25	30	ND	12
Cyanide	3.08	n/a	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	22	0 - 10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	0.3	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	0 - 1,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	1.46	0 - 150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	0.022	0 - 0.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	2	0 - 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NRG	0 - 6,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	0 - 2,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.52	0 - 20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	42	< 0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pesticides/PCBs																									
4,4' -DDD (P,P' -DDD)	0.0056	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4' -DDE (P,P' -DDE)	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4' -DDT (P,P' -DDT)	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordane/2	0.038	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin	0.00084	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan I (Alpha)	0.44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Material.

ND Not Detected

\- Not Analyzed

**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

NRG No Remediation Goal has been Determined

[1] Area B Sample is From CCA Treatment Area

*** Hanford T. Shacklette and Josephine G. Boerngen, U.S. Geological Survey, Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States. U.S. Geological Survey Paper 1270, Washington, D.C.: GPO, 1984.

TABLE 3-3. SUBSURFACE SOIL SAMPLES - INORGANICS AND PESTICIDE/PCBs
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Inorganics	**RG	***Naturally Occurring Levels	SB-01* 10/4/96	SB-02 10/4/96	SB-03 10/4/96	SB-04 10/4/96	SB-05 10/4/96	SB-06 10/4/96	SB-07 10/4/96	SB-08 10/4/96	SB-09 10/4/96	SB-10 10/4/96	SB-11 10/4/96	SB-12 10/4/96	SB-13 10/4/96	SB-14 10/4/96	SB-15 10/4/96	SB-16 10/4/96	SB-17 10/4/96	SB-18 10/4/96	SB-19 10/4/96	SB-20 10/4/96	SB-21 10/4/96
Aluminum	74	7,000 - 15,000	770	2,600	3,700	1,100	1,100	1,100	920	1,600	13,000	7,400	1,100	1,800	2,100	800	440	350	950	440	340	2,100	1,100
Arsenic	1	0 - 2.6	2J	9.2J	ND	4.2J	ND	ND	ND	19	5.2	ND	2.9	4.2	ND	2.3	ND	ND	ND	ND	ND	ND	ND
Barium	40	10 - 200	4.4	1.9	16	25	4.5	7.3	18	47	39	21	24	18	2.3	11	2	2.4	5.2	0.99J	0.74J	6	5.9
Cadmium	0.1	n/a	ND	ND	ND	ND	ND	ND	ND	0.96J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NRG	0 - 2,300	1,400J	170J	17,000	490J	470	230	380	8,700	820	800	970	13,000	ND	230	41J	150	71	170J	2.7J	550	460
Chromium	1	0 - 20	2.9	1.8J	10	3.4J	2.3J	2.8J	2.5	12	18	12	6.5	6.4	1.6J	3.4J	2.4J	1.5J	3.2	ND	ND	5.8	6.1
Cobalt	4.4	< 3	ND	ND	1.5J	0.77J	ND	ND	0.75J	2.7J	6.2J	3.6J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	20	0 - 10	3.1J	4.2J	ND	30	ND	8J	ND	100	11	ND	7.9	12	ND	6.3J	ND	ND	ND	ND	ND	ND	ND
Cyanide	3.08	n/a	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron	22	0 - 10,000	1,600J	720J	4,000	3,600J	1,600	1,400	1,900	17,000	14,000	7,200	2,600	2,700	1,300	2,100	970J	570	1,500	1,000J	840J	1,900	1,500
Lead	0.3	< 10	1.6J	5.4J	15	180J	3.7	2.8J	7.4	110	14	3.8	58	38	2	8.1J	0.94J	1.3	2	7.4J	0.93J	2	2.6
Magnesium	NRG	0 - 1,500	160	14J	1,800	120	110	140J	96	420	1,300	910	180	900	ND	ND	90	ND	150	23	22	340	120
Manganese	1.46	0 - 150	6	2.2J	24	26	8.1	ND	10	130	110	130	18	51	4.1	9.5J	5.1	ND	6.1	4.1	4.4	10	8.8
Mercury	0.022	0 - 0.051	ND	ND	ND	0.48	ND	ND	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	2	0 - 5	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NRG	0 - 6,800	130	50J	450	180	220J	230	ND	ND	780	560J	170	ND	ND	210	170	ND	330J	67	84	320	ND
Sodium	NRG	0 - 2,000	65	ND	280	12J	ND	ND	ND	150	110	180	ND	620	ND	ND	ND	ND	ND	ND	ND	120	ND
Vanadium	0.52	0 - 20	3.2J	2.1J	12J	3.7J	3.2J	3.1J	3.3J	8.7J	34	18	4.7J	6.1J	3.6J	3J	2.3J	1.7J	4.2J	ND	1.4J	5.1J	3.8J
Zinc	42	< 0	5.9	ND	24	48	18	23	22	120	73	36	82	60	5.1	19	2.2J	8.6	9.2	3.6J	2.2J	7.7	15
Pesticides/PCBs																							
4,4' -DDD (P,P' -DDD)	0.0056	-	ND	ND	0.044	0.020	ND	ND	ND	ND	ND	ND	0.064	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4' -DDE (P,P' -DDE)	0.004	-	ND	ND	0.035J	0.0063	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4' -DDT (P,P' -DDT)	0.004	-	ND	ND	0.0075JN	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-Chlordane/2	0.038	-	ND	ND	ND	ND	ND	ND	0.150JN	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.00084	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.014N	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan I (Alpha)	0.44	-	ND	ND	0.0024N	ND	0.089J	ND	ND	ND	0.008	ND	ND	0.023N	ND	ND	ND	ND	0.0054N	ND	ND	0.0032	0.017

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Material.

ND Not Detected

\- Not Analyzed

**RG Shaded Cells Exceed Preliminary Soil Remediation Goal

NRG No Remediation Goal has been Determined

[1] Area B Sample is From CCA Treatment Area

*** Hanford T. Shacklette and Josephine G. Boerngen, U.S. Geological Survey, Elemental Concentrations in Soils and Other Surficial Materials of the Conterminous United States. U.S. Geological Survey Paper 1270, Washington, D.C.: GPO, 1984.

TABLE 4-1

TABLE 4-1. SHALLOW AQUIFER GROUNDWATER SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Extractable Organics (mg/L)	*RG	CW-1 (HT) 12/3/91	CW-1 (LT) 12/3/91	CW-1 11/1/92	CW-1 6/1/93	CW-2 (HT) 12/3/91	CW-2 (LT) 12/3/91	CW-2 11/1/92	CW-2 6/1/93	CW-3 (HT) 12/3/91	CW-3 (LT) 12/3/91	CW-3 11/1/92	CW-3 6/1/93	CW-4 (HT) 12/3/91	CW-4 (LT) 12/3/91	CW-4 11/1/92	CW-4 6/1/93	CW-5 (HT) 12/3/91	CW-5 (LT) 12/3/91	CW-5 11/1/92	CW-5 6/1/93	AW-01 1/7/95	GW-1 1/7/95	GW-2 1/7/95	GW-4 1/7/95	GW-5 1/7/95	B-2 3/11/92	B-3 3/13/92	B-4 3/12/92	B-5 3/11/92	B-6 3/12/92	MW-6 11/26/95	MW-6 9/8/86	MW-6 3/12/90	MW-6 10/5/90	MW-6 10/14/91	MW-6 3/12/92
1,1-Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-
2,4,5-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	ND
2,4,6-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	ND
2,4-Dimethylphenol	0.073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
2,4-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
2-Chlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
2-Methylnaphthalene	0.028	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.018	ND	ND	-	-	-	-	-	-	-	-	-	ND	ND	-
2-Methylphenol	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-
3- and/or 4-Methylphenol	0.018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	ND
Acenaphthene	0.08	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.04	0.032	ND	ND	ND	3	ND	0.022	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	0.21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	0.0009J	ND	-	-	-	-	-	-	-	-	ND	ND	ND	-
Anthracene	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	0.94	ND	ND	-	-	ND	ND	ND	ND	ND
Benzo Perylene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	0.42	ND	ND	-	-	ND	ND	ND	ND	ND
Benzo(a)Pyrene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b,k)Fluoranthene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	-	-	-	-	-	ND	ND	ND	-	ND	-	-
Benzo(b)Fluoranthene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.21	ND	ND	-	-	-	-	-	-	ND
Benzo(k)Fluoranthene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.056	ND	ND	-	-	-	-	-	-	ND
Benzo(g,h,i)Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	-
Bis(2-chloroethyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	ND
Bis(2-ethylhexyl)Phthalate	0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.36	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cresol (ortho)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-
Cresol m & p	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-
Dibenzo(a,h)Anthracene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	0.011	ND	ND	-	-	ND	-	ND	ND	ND
Dibenzofuran	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.014	ND	ND	-	-	-	-	-	-	-	-	ND	ND	-
Fluoranthene	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	0.0078	ND	ND	ND	2.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.015	0.0007J	ND	-	-	-	-	-	-	-	-	ND	ND	-	ND
Indeno(1,2,3-cd)Pyrene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	0.035	ND	ND	ND	ND	ND	-	ND	ND	ND
Naphthalene	0.021	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	ND	ND	0.29	ND	ND	ND	ND	14	ND	0.052	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	ND	-
Pentachlorophenol	0.0032	-	0.005	ND	0.001	0.016	0.016	0.7	0.19	0.038	0.001	0.03	0.003	0.001	0.001	0.004	0.007	0.001	0.001	0.07	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	1	-	-	-	ND	-	-	-	0.008	-	-	-	ND	-	-	-	ND	-	-	-	ND	ND	ND	0.0078	0.0005	ND	ND	ND	6.8	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-
Pyrene	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	ND	ND	-	-
Tetrachlorophenols	1.1	-	-	-	ND	-	-	-	0.1	-	-	-	ND	-	-	-	ND	-	-	-	0.005	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	ND	-
Misc. Extractable Organics																																						
(Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethylidene) Biphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Dimethylnaphthalene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrobenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrodimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrodimethylindene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenol (not 2,4)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenolisocyanate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenyldimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylidimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isoquinolinone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindanol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyltriphenylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalenecarbonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalic Anhydride		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthridinone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylbrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylpyridine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed. For Misc. Extractable Organics No Presumptive Evidence or Presence of Material.
HT/LT High Tide/Low Tide
*RG Shaded Cells Exceed Health Based Remediation Goal

TABLE 4-1. SHALLOW AQUIFER GROUNDWATER SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Extractable Organics (mg/L)	*RG	MW-6 10/15/92	MW-6 11/17/93	MW-6 2/26/99	MW-7 11/28/85	MW-7 9/8/86	MW-7 3/12/90	MW-7 10/9/90	MW-7 10/14/91	MW-7 3/12/92	MW-7 10/15/92	MW-7 11/17/93	MW-7 2/26/99	MW-8 11/28/85	MW-8 9/8/86	MW-8 3/12/90	MW-8 10/9/90	MW-8 10/14/91	MW-8 3/12/92	MW-8 10/15/92	MW-8 11/17/93	MW-8 11/14/96	MW-8 2/26/99	MW-9 11/28/85	MW-9 9/8/86	MW-9 3/12/90	MW-9 10/9/90	MW-9 10/14/91	MW-9 3/11/92	MW-9 10/15/92	MW-9 11/17/93	MW-9 2/27/99	MW-10 3/11/92	MW-10 10/14/92	MW-10 11/17/93	MW-10 2/26/99	MW-11 11/14/96	MW-12 11/17/93	MW-12 2/26/99
1,1-Biphenyl		-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	ND	-	-	-	-	-	ND	ND	ND	ND	-	-	-	-	-	ND	ND	ND	-	ND	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
2,4-Dimethylphenol	0.073	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.220J	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
2-Methylnaphthalene	0.028	-	-	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	0.067	-	ND
2-Methylphenol	0.18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.530J	-	-
3- and/or 4-Methylphenol	0.018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.690J	-	-
4-Chloro-3-Methylphenol		ND	ND	-	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	-	-	-	ND	ND	ND	-	-	ND	ND	-	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	-
Acenaphthene	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.720J	0.77	0.1
Acenaphthylene	0.21	-	-	ND	-	-	ND	ND	ND	-	-	-	ND	-	-	ND	ND	ND	-	-	-	ND	ND	-	-	ND	ND	ND	-	-	-	ND	-	-	-	ND	0.034	-	ND
Anthracene	2.1	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.990J	ND	0.021
Benzo Perylene	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.019	-	-
Benzo(a)Anthracene	0.01	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.220J	ND	0.016
Benzo(a)Pyrene	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.067	ND	ND
Benzo(b,k)Fluoranthene	0.01	-	-	ND	ND	ND	ND	-	ND	-	-	-	ND	ND	ND	ND	-	ND	-	-	-	ND	ND	ND	ND	ND	ND	ND	-	-	-	ND	-	-	-	ND	0.145J	-	0.013
Benzo(b)Fluoranthene	0.01	ND	ND	-	-	-	-	-	-	ND	ND	ND	-	-	-	-	-	-	ND	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	-
Benzo(k)Fluoranthene	0.01	ND	ND	-	-	-	-	-	-	ND	ND	ND	-	-	-	-	-	-	ND	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	-
Benzo(g,h,i)Perylene		-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	-	ND	ND	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)Ether		ND	ND	-	-	-	-	-	-	ND	ND	ND	-	-	-	-	-	-	ND	ND	ND	-	-	-	-	-	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	-
Bis(2-ethylhexyl)Phthalate	0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-
Carbazole	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6J	0.21	0.014
Chrysene	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.220J	ND	0.017
Cresol (ortho)		-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND
Cresol m & p	0.01	-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	0.013
Dibenzo(a,h)Anthracene	0.01	ND	ND	ND	-	-	ND	-	ND	ND	ND	ND	ND	-	-	ND	-	ND	ND	ND	ND	-	ND	-	-	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
Dibenzofuran	0.01	-	-	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	0.540J	-	0.06
Fluoranthene	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.0J	0.31	0.087
Fluorene	0.28	-	-	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	0.660J	-	0.077
Indeno(1,2,3-cd)Pyrene	0.01	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.022	-	ND
Naphthalene	0.021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.085J	3.1	ND
p-Chloro-m-cresol		-	-	ND	-	-	ND	-	ND	-	-	-	ND	-	-	ND	-	ND	-	-	-	-	ND	-	-	ND	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND
Pentachlorophenol	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
Phenanthrene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8J	0.74	0.1
Phenol	1	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.210J	ND	ND
Pyrene	1	-	-	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	-	-	-	ND	0.570J	-	0.05
Tetrachlorophenols	1.1	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND
Trichlorophenols		-	-	-	-	-	ND	-	ND	-	-	-	-	-	-	ND	-	ND	-	-	-	-	-	-	-	ND	-	ND	-	-	-	-	-	-	-	-	-	-	-
Misc. Extractable Organics																																							
(Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethylidene) Biphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Dimethylnaphthalene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.200 JN	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005 JN	-	-
Cyclopentaphenanthenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.008 JN	-	-
Dihydrobenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrodimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrodimethylindene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (5 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenol (not 2,4)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenolisocyanate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenyldimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	-
Isoquinolinone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006 JN	-	-
Methylfluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindanol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004 JN	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.010 JN	-	-
Methylbiphenylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.010 JN	-	-
Naphthalenecarbonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalic Anhydride		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003 JN	-	-
Phenanthridinone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylpropphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylpyridine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003 JN	-	-
Trimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004 JN	-	-
Trimethylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.030 JN	-	-

Note:
- Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
- Not Analyzed. For Misc. Extractable Organics No Presumptive Evidence or Presence of Material.
HT/LT High Tide/Low Tide
*RG Shaded Cells Exceed Health Based Remediation Goal

TABLE 4-1. SHALLOW AQUIFER GROUNDWATER SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Extractable Organics (mg/L)	*RG	MW-23 10/13/92	MW-23 11/17/93	MW-23 2/27/98	MW-24 10/16/92	MW-24 11/18/93	MW-24R 11/14/96	MW-24R 2/27/98	MW-25 10/13/92	MW-25 11/18/93	MW-25 11/14/96	MW-25 2/27/98	MW-27 11/18/93	MW-27 11/14/96	MW-27 2/26/98	MW-28 11/18/93	MW-28 11/14/96	MW-28 2/27/98	MW-29 11/18/93	MW-29 11/14/96	MW-29 2/27/98	MW-30 11/18/93	MW-30 2/27/98	MW-31 11/14/96	MW-31 2/27/98	MW-34 11/14/96	MW-34 2/27/98	MW-37* 11/14/96	MW-37* 2/27/98	MW-40 11/14/96	MW-40 2/26/98
1,1-Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
2,4-Dimethylphenol	0.073	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
2-Chlorophenol		ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND		ND	ND	ND	-	ND	-	ND	-	ND	-	ND
2-Methylnaphthalene	0.028	-	-	ND	-	-	ND	ND	-	-	0.001J	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	0.005J	ND	ND	ND
2-Methylphenol	0.18	-	-	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	ND	-	ND	-	ND	-
3- and/or 4-Methylphenol	0.018	-	-	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	0.004J	-	-	-	ND	-	ND	-	ND	-	ND	-
4-Chloro-3-Methylphenol		ND	ND	-	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Acenaphthene	0.08	ND	ND	ND	0.11	0.29	0.200	0.14	0.120	0.043	0.009J	ND	ND	0.001J	ND	0.012	0.017	ND	ND	ND	ND	0.040	ND	ND	ND	0.250	0.077	0.051	0.091	ND	ND
Acenaphthylene	0.21	-	-	ND	-	-	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	2.1	ND	ND	ND	ND	ND	ND	ND	0.070	0.025	0.006J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.026	ND	ND	ND	0.016J	0.017	ND	ND	0.002J	ND
Benzo Perylene	0.01	-	-	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	ND	-	ND	-	ND	-
Benzo(a)Anthracene	0.01	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Benzo(a)Pyrene	0.01	ND	ND	ND	ND	ND	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b,h)Fluoranthene	0.01	-	-	ND	-	-	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)Fluoranthene	0.01	ND	ND	-	ND	ND	-	-	0.04	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	0.01	ND	ND	-	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)Ether		ND	ND	-	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)Phthalate	0.003	-	-	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	0.068	-	ND	-	ND	ND
Carbazole	0.01	ND	ND	ND	0.03	ND	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.013	ND	ND	ND	ND	ND	0.001J	ND	ND	ND
Chrysene	0.01	ND	ND	ND	ND	ND	ND	ND	0.04	ND	0.001J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cresol (ortho)		-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Cresol m & p	0.01	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Dibenzo(a,h)Anthracene	0.01	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
Dibenzofuran	0.01	-	-	ND	-	-	0.041J	0.036	-	-	0.005J	ND	-	ND	ND	-	0.006J	ND	-	ND	ND	-	ND	ND	ND	0.150	0.038	ND	ND	ND	ND
Fluoranthene	0.28	ND	ND	ND	ND	ND	ND	ND	0.16	0.034	0.012	ND	ND	ND	ND	ND	0.002J	ND	ND	ND	ND	0.016	ND	ND	ND	0.036J	0.074	ND	ND	ND	ND
Fluorene	0.28	-	-	ND	-	-	0.072J	0.052	-	-	0.006J	ND	-	ND	ND	-	0.013	ND	-	ND	ND	-	ND	ND	ND	0.200	0.069	0.007J	0.013	ND	ND
Indeno(1,2,3-cd)Pyrene	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.021	ND	ND	ND	ND	0.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol		-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Pentachlorophenol	0.0032	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
Phenanthrene	1	ND	ND	ND	0.02	0.068	0.022J	0.017	0.190	0.062	0.017	ND	ND	ND	ND	0.021	0.003J	ND	ND	ND	ND	0.058	ND	ND	ND	0.230	0.087	0.003J	ND	ND	ND
Phenol	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	1	-	-	ND	-	-	ND	ND	-	-	0.008J	ND	-	ND	ND	-	0.001J	ND	-	ND	ND	-	ND	ND	ND	0.022J	0.055	ND	ND	ND	ND
Tetrachlorophenols	1.1	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Extractable Organics																															
(Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethylidene) Biphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Dimethylnaphthalene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.080 JN	-	0.008 JN	-	-	-
Benzofluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	-	-	-	-
Dihydrobenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.010 JN	-	-	-	-	-
Dihydrodimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrodimethylindene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.010 JN	-	-	-
Dimethylnaphthalene (5 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100 JN	-	-	-	-	-
Dimethylphenol (not 2,4)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenylisocyanate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylidimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylidimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isoquinolinone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003 JN	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.030 JN	-	-	-	-	-
Methylindanol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyltriphenylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalenecarbonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	-	-	-	-
Naphthalenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalic Anhydride		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthridinone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylpyridine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed. For Misc. Extractable Organics No Presumptive Evidence or Presence of Material.
HT/LT High Tide/Low Tide
*RG Shaded Cells Exceed Health Based Remediation Goal

TABLE 4-1. SHALLOW AQUIFER GROUNDWATER SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Extractable Organics (mg/L)	*RG	MW-13 3/11/92	MW-13 10/15/92	MW-13 11/17/93	MW-13 2/28/98	MW-14 3/11/92	MW-14 10/16/92	MW-15 3/11/92	MW-15 10/15/92	MW-15 11/18/93	MW-15 11/14/98	MW-15 2/28/98	MW-16 3/11/92	MW-16 10/14/92	MW-16 11/18/93	MW-16 11/14/98	MW-16 2/28/98	MW-17 3/11/92	MW-17 10/14/92	MW-17 11/18/93	MW-17 11/14/98	MW-17 2/28/98	MW-18 10/15/92	MW-18 11/17/93	MW-18 2/28/98	MW-19 10/16/92	MW-19 11/18/93	MW-19 2/28/98	MW-20 10/16/92	MW-20 11/18/93	MW-20 11/14/98	MW-20 2/28/98	MW-21 10/16/92	MW-21 11/17/93	MW-21 2/28/98	MW-22 10/13/92
1,1-Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
2,4-Dimethylphenol	0.073	0.063	0.01	ND	ND	0.370	ND	0.044	0.03	ND	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.03
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
2-Chlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
2-Methylnaphthalene	0.028	-	-	-	ND	-	-	-	-	-	0.049	0.014	-	-	-	ND	ND	-	-	-	ND	ND	-	-	ND	-	-	-	-	-	ND	ND	-	-	ND	-
2-Methylphenol	0.18	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-
3- and/or 4-Methylphenol	0.018	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-
4-Chloro-3-Methylphenol		ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND
Acenaphthene	0.08	1.1	1.1	0.80	ND	0.74	0.81	0.15	0.14	0.074	0.140	0.04	ND	ND	ND	ND	ND	0.024	ND	0.016	0.010	0.014	ND	ND	ND	0.18	0.27	0.16	0.05	0.014	0.014	0.025	ND	ND	ND	2.5
Acenaphthylene	0.21	-	-	-	ND	-	-	-	-	-	0.002J	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	ND	-	-	ND	-
Anthracene	2.1	0.13	0.26	ND	ND	0.11	0.26	ND	ND	ND	0.004J	ND	ND	ND	ND	0.001J	ND	0.023	0.02	ND	0.003J	ND	ND	ND	ND	0.01	ND	ND	ND	ND	0.001J	ND	ND	ND	ND	0.18
Benzo Perylene	0.01	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-
Benzo(a)Anthracene	0.01	0.057	0.12	ND	ND	0.037	0.14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.13
Benzo(a)Pyrene	0.01	0.02	0.04	ND	ND	0.011	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06
Benzo(b,k)Fluoranthene	0.01	-	-	-	ND	-	-	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	ND	-	-	ND	-
Benzo(b)Fluoranthene	0.01	0.037	0.08	ND	-	0.021	0.11	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	0.01	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	0.12
Benzo(k)Fluoranthene	0.01	0.01	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND
Benzo(g,h,i)Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-chloroethyl)Ether		ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND
Bis(2-ethylhexyl)Phthalate	0.003	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-
Carbazole	0.01	0.087	0.32	0.22	ND	0.11	0.19	0.021	0.03	ND	0.009J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19
Chrysene	0.01	0.057	0.10	ND	ND	0.036	0.09	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
Cresol (ortho)		-	-	-	ND	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	-	ND	-
Cresol m & p	0.01	-	-	-	ND	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	-	ND	-
Dibenzo(a,h)Anthracene	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
Dibenzofuran	0.01	-	-	-	ND	-	-	-	-	-	0.05	0.015	-	-	-	ND	ND	-	-	-	0.002J	ND	-	-	ND	-	-	ND	-	-	ND	ND	-	-	ND	-
Fluoranthene	0.28	0.56	0.76	0.30	ND	0.38	0.79	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.065	0.08	0.010	0.002J	0.013	ND	ND	ND	0.02	ND	ND	0.012	ND	0.001J	ND	ND	ND	ND	1.7
Fluorene	0.28	-	-	-	ND	-	-	-	-	-	0.029	0.011	-	-	-	ND	ND	-	-	-	0.009J	0.016	-	-	ND	-	-	0.043	-	-	0.001J	ND	-	-	ND	-
Indeno(1,2,3-cd)Pyrene	0.01	ND	0.02	ND	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02
Naphthalene	0.021	2.8	3.5	3.1	ND	3.1	4.9	0.11	ND	0.055	0.360	0.046	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30	0.29	ND	0.04	ND	ND	ND	ND	ND	ND	4.5
p-Chloro-m-cresol		-	-	-	ND	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	-	ND	-
Pentachlorophenol	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	0.002J	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
Phenanthrene	1	1.2	1.6	0.77	ND	1.1	1.4	0.023	0.05	0.015	0.015	ND	ND	ND	ND	ND	ND	0.060	0.06	0.017	0.002J	0.016	ND	ND	ND	0.08	0.077	0.015	0.05	ND	ND	ND	ND	ND	ND	3.7
Phenol	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	1	-	-	-	ND	-	-	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-	0.002J	0.015	-	-	ND	-	-	ND	-	-	ND	ND	-	-	ND	-
Tetrachlorophenols	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
Trichlorophenols		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Extractable Organics																																				
(Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethylidene) Biphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Dimethylnaphthalene (3 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	0.009 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	0.006 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentephenanthenone		-	-	-	-	-	-	-	-	-	0.010 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrobenzothiophene		-	-	-	-	-	-	-	-	-	0.003 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydrodimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005 JN	-	-	-	-	-	-	-	-	-	0.002 JN	-	-	-	-	-
Dihydrodimethylindene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	-	-	-	0.008 JN	-	-	-	-	-	-	-	-	-	0.007 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (5 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenol (not 2,4)		-	-	-	-	-	-	-	-	-	0.004 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphenolisocyanate		-	-	-	-	-	-	-	-	-	0.007 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenyldimethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.008 JN	-	-	-	-	-	-	-	-	-	0.007 JN	-	-	-	-	-
Ethylidimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.003 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylphenol		-	-	-	-	-	-	-	-	-	0.002 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isoquinolinone		-	-	-	-	-	-	-	-	-	0.020 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindanol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyltriphenylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalenecarbonitrile		-	-	-	-	-	-	-	-	-	0.004 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalenol		-	-	-	-	-	-	-	-	-	0.005 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalic Anhydride		-	-	-	-	-	-	-	-	0.008 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthridinone		-	-	-	-	-	-	-	-	-	0.100 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylphenol		-	-	-	-	-	-	-	-	-	0.004 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylpyridine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylphenol		-	-	-	-	-	-	-	-	-	0.002 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
- Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
- Not Analyzed. For Misc. Extractable Organics No Presumptive Evidence or Presence of Material.
HT/LT High Tide/Low Tide
*RG Shaded Cells Exceed Health Based Remediation Goal

TABLE 4-2

TABLE 4-2. SHALLOW AQUIFER GROUNDWATER SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Purgeable Organics (mg/L)	*RG	AW-01 1/7/85	GW-1 1/7/85	GW-2 1/7/85	GW-4 1/7/85	GW-5 1/7/85	B-2 3/11/92	B-3 3/13/92	B-4 3/12/92	B-5 3/11/92	B-6 3/12/92	MW-6 3/12/92	MW-6 10/15/92	MW-6 11/17/93	MW-6 2/26/98	MW-7 3/12/92	MW-7 10/15/92	MW-7 11/17/93	MW-7 2/26/98	MW-8 3/12/92	MW-8 10/15/92	MW-8 11/17/93	MW-8 11/14/98	MW-8 2/28/98	MW-9 3/11/92	MW-9 10/15/92	MW-9 11/17/93	MW-9 2/27/98
1,1,1-Trichloroethane	0.2	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
1,1,2,2-Tetrachloroethane	0.0006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	-
1,1,2-Trichloroethane	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
1,1-Dichloroethene	0.0007	0.0066	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
1,1-Dichloroethylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
1,2-Dichloroethane	0.0004	0.055	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
1,3-Dichloropropane		-	-	-	-	-	ND	ND	ND	ND	ND	ND	-	-	-	ND	-	-	-	ND	-	-		-	ND	-	-	-
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Acetone	0.7	ND	ND	0.5	[illegible]	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrolein		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	0.001	ND	0.0003J	0.0003J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloroethane	0.0004	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Bromoform		0.014	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Carbon Disulfide		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.0005	0.038	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Chlorobenzene		0.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Chloroform	0.0005	0.063	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	ND	ND	-	-	ND	ND	-		-	ND	ND	-	-
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Chloromethylpropane		-	-	0.003JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Dibromochloromethane	0.0003	0.038	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Dichlorodifluoromethane		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Dichloromethane	NRG	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	0.002	ND	-	-	ND	ND	ND	-
Ethyl Benzene	0.029	ND	0.003J	0.0051	ND	ND	ND	ND	0.110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorotrichloromethane		-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
M/P-Xylene	0.53	-	-	-	-	-	ND	ND	0.090	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
Methylene Chloride	0.005	0.037	0.007J	0.007J	ND	0.023	-	-	-	-	-	-	-	-	ND	-	-	-	ND	ND	-	-	ND	ND	-	-	-	ND
Methyl Butyl Ketone		ND	ND	ND	0.03	ND	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	0.17	ND	0.005J	ND	ND	0.026	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	ND		-	-	-	
Methyl Isobutyl Ketone		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Methyl-T-Butyl Ether (MTBE)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-Xylene		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	0.53	ND	ND	ND	ND	ND	ND	ND	0.040	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND
Propene	NRG	-	0.800JN	0.100JN	0.090JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	0.0011	0.081	-	-	-	-	ND	ND	ND	ND	ND	ND	-	-		ND	-	-	-	ND	-	-			ND	-	-	
Tetrachloroethylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1	ND	ND	0.005J	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	0.53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	ND	-	-	-	-	-
Trans-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Trans-1,3-Dichloropropene		ND	ND	ND	ND	ND								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.0028	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	ND	ND	-
Vinyl Acetate		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Purgeable Organics																												
Benzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylindene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methyl Ethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetramethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material
ND Not Detected
\- Not Analyzed
*RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been Determined

TABLE 4-2. SHALLOW AQUIFER GROUNDWATER SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Purgeable Organics (mg/L)	*RG	MW-10 3/11/92	MW-10 10/14/92	MW-10 11/17/93	MW-10 2/26/98	MW-11 11/14/96	MW-12 11/17/93	MW-12 2/26/98	MW-13 3/11/92	MW-13 10/15/92	MW-13 11/17/93	MW-13 2/26/98	MW-14 3/11/92	MW-14 10/16/92	MW-15 3/11/92	MW-15 10/15/92	MW-15 11/18/93	MW-15 11/14/96	MW-15 2/26/98	MW-16 3/11/92	MW-16 10/14/92	MW-16 11/18/93	MW-16 11/14/96	MW-16 2/26/98
1,1,1-Trichloroethane	0.2	ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
1,1,2,2-Tetrachloroethane	0.0006	ND	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	ND	-
1,1,2-Trichloroethane	0.003	ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
1,1-Dichloroethane		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
1,1-Dichloroethene	0.0007	ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
1,1-Dichloroethylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
1,2-Dichloroethane	0.0004	ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
1,2-Dichloropropane		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
1,3-Dichloropropane		ND	-	-	-		-	-	ND	-	-	-	ND	-	ND	-	-	-	-	ND	-	-		-
2-Chloroethylvinyl Ether		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Acetone	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrolein		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	0.001	ND	ND	ND	ND	0.130	ND	ND	0.073	0.1	0.046	ND	0.030	0.019	ND	0.005	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloroethane	0.0004	ND	ND	ND	-	-	ND		ND	ND	ND		ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Bromoform		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	ND	-	-	ND	-	ND	ND	ND		ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Carbon Disulfide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.0005	ND	ND	ND	-	-	ND	-	ND	ND	ND		ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Chlorobenzene		ND	ND	ND	-	-	ND	-	ND	ND	ND		ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Chloroethane		ND	ND	ND	-	-	ND	-	ND	ND	ND		ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Chloroform	0.0005	ND	ND	-	-		-	-	ND	ND	-		0.0011	ND	ND	ND	-	-	-	ND	ND	-		-
Chloromethane		ND	ND	ND	-	-	ND	-	ND	ND	ND		ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Chloromethylpropane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Dibromochloromethane	0.0003	ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Dichlorodifluoromethane		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Dichloromethane	NRG	ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	0.001	ND	-	-
Ethyl Benzene	0.029	ND	ND	ND	ND	0.130	ND	ND	0.041	0.04	0.026	ND	0.067	0.060	0.008	0.008	0.0051	0.006J	ND	0.0027	ND	ND	ND	ND
Fluorotrichloromethane		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
M/P-Xylene	0.53	ND	ND	ND	ND	-	0.011	ND	0.044	0.05	0.014	ND	0.073	0.078	0.008	0.006	ND	-	ND	0.0037	ND	ND	-	ND
Methylene Chloride	0.005	-	-	-	ND	ND	-	ND	-	-	-	ND	-	-	-	-	-	ND	ND	-	-	-	ND	ND
Methyl Butyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	0.17	-	-	-		ND	-	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	
Methyl Isobutyl Ketone		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Methyl-T-Butyl Ether (MTBE)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-Xylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	0.53	ND	ND	ND	ND	-	0.0066	ND	0.025	0.02	0.013	ND	0.036	0.038	ND	0.003	ND	-	ND	0.0032	ND	ND	-	ND
Propene	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	0.0011	ND	-	-			-	-	ND	-	-		ND	-	ND	-	-	-		ND	-	-		
Tetrachloroethylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1	ND	ND	ND	ND	0.160	0.0074	ND	0.031	0.01	ND	ND	0.046	0.028	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	0.53	-	-	-	-	0.250	-	-	-	-	-		-	-	-	-	-	0.009J		-	-	-	ND	-
Trans-1,2-Dichloroethylene		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-		ND	ND	ND	-	-
Trans-1,3-Dichloropropene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.0028	ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Vinyl Chloride		ND	ND	ND	-	-	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-
Vinyl Acetate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Purgeable Organics																								
Benzofuran		-	-	-	0.200 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylindene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene		-	-	-	0.070 JN	-	-	-	-	-	-	-	-	-	-	-	0.006 JN	-	-	-	-	-	-	-
Indane		-	-	-	1.0JN	-	-	-	-	-	-	-	-	-	-	-	0.200 JN	-	-	-	-	-	-	-
Indene		-	-	-	0.100 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran (2 Isomers)		-	-	-	0.300 JN	-	-	-	-	-	-	-	-	-	-	-	0.050 JN	-	-	-	-	-	-	-
(Methyl Ethyl) Benzene		-	-	-	0.050 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindan		-	-	-	0.050 JN	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	-	-	-	-	-	-
Tetramethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene		-	-	-	0.100 JN	-	-	-	-	-	-	-	-	-	-	-	0.010 JN	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material
ND Not Detected
\- Not Analyzed
*RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been Determined

TABLE 4-2. SHALLOW AQUIFER GROUNDWATER SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters	*RG	MW-17 3/11/92	MW-17 10/14/92	MW-17 11/18/93	MW-17 11/14/96	MW-17 2/26/98	MW-18 10/15/92	MW-18 11/17/93	MW-18 2/28/98	MW-19 10/16/92	MW-19 11/18/93	MW-19 2/26/98	MW-20 10/16/92	MW-20 11/18/93	MW-20 11/14/96	MW-20 2/26/98	MW-21 10/16/92	MW-21 11/17/93	MW-21 2/26/98	MW-22 10/13/92	MW-23 10/13/92	MW-23 11/17/93	MW-23 2/27/98
Purgeable Organics (mg/L)																							
1,1,1-Trichloroethane	0.2	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
1,1,2,2-Tetrachloroethane	0.0006	ND	ND	ND	0.006J	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	-
1,1,2-Trichloroethane	0.003	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
1,1-Dichloroethane		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
1,1-Dichloroethene	0.0007	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
1,1-Dichloroethylene		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
1,2-Dichloroethane	0.0004	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
1,2-Dichloropropane		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
1,3-Dichloropropane		ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinyl Ether		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Acetone	0.7	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrolein		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0055	ND	ND	ND	ND	ND	ND	ND	ND	0.005	ND	ND	ND
Bromodichloroethane	0.0004	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Bromoform		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Carbon Disulfide		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.0005	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Chlorobenzene		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Chloroethane		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Chloroform	0.0005	ND	ND	-		-	ND	-	-	ND	-	-	ND	-		-	0.001	-	-	0.004	ND	-	-
Chloromethane		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Chloromethylpropane		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Dibromochloromethane	0.0003	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Dichlorodifluoromethane		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Dichloromethane	NRG	ND	0.003	ND	-	-	0.002	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	0.002	0.003	ND	-
Ethyl Benzene	0.029	0.0039	0.006	ND	ND	ND	ND	ND	ND	0.011	0.0058	ND	ND	ND	ND	ND	ND	ND	ND	0.037	ND	ND	ND
Fluorotrichloromethane		ND	ND	ND	-	-	ND	ND		ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
M/P-Xylene	0.53	0.0088	0.016	ND	-	ND	ND	ND	ND	0.007	0.0054	ND	ND	ND	-	ND	ND	ND	ND	0.048	ND	ND	ND
Methylene Chloride	0.005	-	-	-	0.017	ND	-	-	ND	-	-	ND	-	-	ND	ND	-	-	ND	-	-	-	ND
Methyl Butyl Ketone		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	0.17	-	-	-	0.015	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-
Methyl Isobutyl Ketone		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Methyl-T-Butyl Ether (MTBE)		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-Xylene		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	0.53	0.0046	0.010	ND	-	ND	ND	ND	ND	0.005	ND	ND	ND	ND	-	ND	ND	ND	ND	0.023	ND	ND	ND
Propene	NRG	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	0.0011	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1	0.0011	0.017	ND	ND	ND	ND	ND	ND	0.001	ND	ND	ND	ND	ND	0.0015	ND	ND	ND	0.011	ND	ND	ND
Total Xylenes	0.53	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-
Trans-1,2-Dichloroethylene		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Trans-1,3-Dichloropropene		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.0028	ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Vinyl Chloride		ND	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-
Vinyl Acetate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Purgeable Organics				-	-	-	-	-	-			-				-			-				
Benzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylindene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethenyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methyl Ethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetramethylbenzene		-	-	0.010 JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material
ND Not Detected
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*RG Shaded Cells Exceed Health Based Remediation Goal
NRG *No Remediation Goal has been Determined*

TABLE 4-2. SHALLOW AQUIFER GROUNDWATER SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Purgeable Organics (mg/L)	*RG	MW-24 10/16/92	MW-24 11/18/93	MW-24 11/14/96	MW-24 2/27/98	MW-25 10/13/92	MW-25 11/18/93	MW-25 11/14/96	MW-25 2/27/98	MW-27 11/18/93	MW-27 11/14/96	MW-27 2/26/98	MW-28 11/18/93	MW-28 11/14/96	MW-28 2/27/98	MW-29 11/18/93	MW-29 11/14/96	MW-29 2/27/98	MW-30 11/18/93	MW-30 2/27/98	MW-31 11/14/96	MW-31 2/27/98	MW-34 11/14/96	MW-34 2/27/98	MW-37* 11/14/96	MW-37* 2/27/98	MW-40 11/14/96	MW-40 2/26/98
1,1,1-Trichloroethane	0.2	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.0006	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND	-
1,1,2-Trichloroethane	0.003	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	0.0007	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.0004	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	-	-	-	-	-	-
2-Chloroethylvinyl Ether		ND	ND	-	-	ND	ND	-	-	ND	-	-	-	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Acetone	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrolein		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acrylonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloroethane	0.0004	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Bromoform		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Carbon Disulfide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.0005	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Chlorobenzene		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Chloroethane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Chloroform	0.0005	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-		-	-	-		-		-	-	-	-	-
Chloromethane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Chloromethylpropane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Dibromochloromethane	0.0003	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Dichloromethane	NRG	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Ethyl Benzene	0.029	0.0089	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001J	ND	ND	ND
Fluorotrichloromethane		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-		ND		-	-	-	-	-	-	-	-
M/P-Xylene	0.53	ND	0.002	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
Methylene Chloride	0.005	-	-	ND	ND	-	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Butyl Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	0.17	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	ND	-	ND	-	ND	-
Methyl Isobutyl Ketone		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Methyl-T-Butyl Ether (MTBE)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-Xylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	0.53	ND	0.001	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	-	ND	-	ND	-	ND
Propene	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	0.53	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	ND	-	0.002J	-	ND	-
Trans-1,2-Dichloroethylene		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Trans-1,3-Dichloropropene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.0028	ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Vinyl Chloride		ND	ND	-	-	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-
Vinyl Acetate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Misc. Purgeable Organics																												
Benzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.007 JN	-	-	-
Dihydromethylindene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.010 JN	-	0.020 JN	-	-	-
Ethenyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020 JN	-	0.020 JN	-	-	-
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.050 JN	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.030 JN	-	0.060 JN	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methyl Ethyl) Benzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetramethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
- * Background Location
- J Estimated Value
- N *Presumptive Evidence of Presence of Material*
- ND Not Detected
- \- Not Analyzed
- *RG Shaded Cells Exceed Health Based Remediation Goal
- NRG No Remediation Goal has been Determined

TABLE 4-3

TABLE 4-3. SHALLOW AQUIFER GROUNDWATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Inorganics (mg/L)	**RG	MW-13 3/11/92	MW-13 10/15/92	MW-13 11/17/93	MW-13 2/26/98	MW-14 3/11/92	MW-14 10/16/92	MW-15 3/11/92	MW-15 10/16/92	MW-15 11/18/93	MW-15 11/14/96	MW-15 2/26/98	MW-16 3/11/92	MW-16 10/14/92	MW-16 11/18/93	MW-16 11/14/96	MW-16 2/26/98	MW-17 3/11/92	MW-17 10/14/92	MW-17 11/18/93	MW-17 11/14/96	MW-17 2/26/98
Aluminum	0.071	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-
Antimony		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (Total)	0.05	0.050	0.048	0.049	0.011	0.010	0.018	0.10	0.11	0.088	0.068	0.056	0.027	ND	ND	ND	ND	0.14	0.04	0.023	0.010	ND
Arsenic (Dissolved)	0.05	ND	ND	ND	-	ND	ND	ND	0.023	ND	-	-	ND	ND	ND	-	-	ND	0.0057	ND	-	-
Barium	2	-	-	-	-	-	-	-	-	-	0.094	-	-	-	-	0.044	-	-	-	-	0.150	-
Beryllium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.005	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-
Calcium	NRG	-	-	-	-	-	-	-	-	-	91	-	-	-	-	9.1	-	-	-	-	32	-
Chromium (Total)	0.05	0.059	0.039	0.04	0.03	0.033	0.069	0.051	0.031	ND	0.009J	0.012	0.120	ND	ND	0.006J	ND	0.18	0.035	0.012	ND	ND
Chromium (Dissolved)		ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	ND	-	-
Cobalt	0.22	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-
Copper (Total)	1	0.080	0.061	0.058	0.027	0.023	0.059	0.086	0.050	ND	ND	ND	0.14	0.030	ND	ND	ND	0.40	0.054	0.025	ND	ND
Copper (Dissolved)	1	ND	ND	ND	-	ND	ND	ND	ND	ND	-	-	ND	ND	ND	-	-	ND	ND	ND	-	-
Cyanide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	1.1	-	-	-	-	-	-	-	-	-	23	-	-	-	-	2.3	-	-	-	-	17	-
Lead (Total)	0.015	0.14	0.12	-	-	0.029	0.050	0.094	0.042	-	ND	-	0.064	0.012	-	ND	-	0.39	0.045	-	ND	-
Lead (Dissolved)		ND	ND	-	-	ND	ND	ND	ND	-	-	-	ND	ND	-	-	-	ND	ND	-	-	-
Magnesium	NRG	-	-	-	-	-	-	-	-	-	22	-	-	-	-	4.5	-	-	-	-	11	-
Manganese	0.073	-	-	-	-	-	-	-	-	-	1.8	-	-	-	-	0.063	-	-	-	-	0.400	-
Mercury	0.0011	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel		-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-
Potassium	NRG	-	-	-	-	-	-	-	-	-	11	-	-	-	-	6.0	-	-	-	-	10	-
Selenium	NRG	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-
Silver		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium		-	-	-	-	-	-	-	-	-	140	-	-	-	-	44	-	-	-	-	120	-
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.026	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	ND	-	-	-	-	ND	-
Yttrium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	2.1	-	-	-	-	-	-	-	-	-	0.034	-	-	-	-	0.045	-	-	-	-	ND	-
Zirconium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
HT/LT High Tide/Low Tide
**RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been determined

TABLE 4-3. SHALLOW AQUIFER GROUNDWATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Inorganics (mg/L)	**RG	MW-18 10/15/92	MW-18 11/17/93	MW-18 2/26/98	MW-19 10/16/92	MW-19 11/18/93	MW-19 2/26/98	MW-20 10/16/92	MW-20 11/18/93	MW-20 11/14/96	MW-20 2/26/98	MW-21 10/16/92	MW-21 11/17/93	MW-21 2/26/98	MW-22 10/13/92	MW-23 10/13/92	MW-23 11/17/93	MW-23 2/27/98	MW-24 10/16/92	MW-24 11/18/93	MW-24 11/14/96	MW-24 2/27/98
Aluminum	0.071	-	-	-	-	-	-	-	-	0.700	-	-	-	-	-	-	-	-	-	-	0.140	-
Antimony		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (Total)	0.05	0.0058	0.016	ND	ND	ND	ND	0.010	ND	ND	ND	0.028	0.019	ND	0.033	ND	ND	ND	0.0064	ND	ND	ND
Arsenic (Dissolved)	0.05	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	0.013	ND	ND	-	ND	ND	-	-
Barium	2	-	-	-	-	-	-	-	-	0.19	-	-	-	-	-	-	-	-	-	-	0.320	-
Beryllium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.005	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	ND	-
Calcium	NRG	-	-	-	-	-	-	-	-	63	-	-	-	-	-	-	-	-	-	-	88	-
Chromium (Total)	0.05	0.67	4.6	0.73	0.030	ND	ND	ND	ND	ND	ND	0.032	0.016	ND	0.20	ND	ND	ND	0.018	0.010	ND	ND
Chromium (Dissolved)		ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-	ND	ND	-	-
Cobalt	0.22	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	ND	-
Copper (Total)	1	0.051	0.05	0.034	ND	ND	ND	0.032	ND	ND	ND	0.035	ND	ND	0.038	ND	ND	ND	0.027	ND	ND	ND
Copper (Dissolved)	1	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	-	ND	ND	ND	-	ND	ND	-	-
Cyanide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	1.1	-	-	-	-	-	-	-	-	73	-	-	-	-	-	-	-	-	-	-	61	-
Lead (Total)	0.015	0.081	-	-	0.0050	-	-	0.012	-	ND	-	0.061	-	-	0.037	ND	-	-	0.071	-	ND	-
Lead (Dissolved)		ND	-	-	ND	-	-	ND	-	-	-	ND	-	-	ND	ND	-	-	ND	-	-	-
Magnesium	NRG	-	-	-	-	-	-	-	-	39	-	-	-	-	-	-	-	-	-	-	33	-
Manganese	0.073	-	-	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	-	-	-	3.6	-
Mercury	0.0011	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	ND	-
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel		-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	ND	-
Potassium	NRG	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	8.9	-
Selenium	NRG	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	ND	-
Silver		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium		-	-	-	-	-	-	-	-	220	-	-	-	-	-	-	-	-	-	-	130	-
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.026	-	-	-	-	-	-	-	-	0.019J	-	-	-	-	-	-	-	-	-	-	ND	-
Yttrium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	2.1	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	ND	-
Zirconium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- HT/LT High Tide/Low Tide
- **RG Shaded Cells Exceed Health Based Remediation Goal
- NRG No Remediation Goal has been determined

TABLE 4-3. SHALLOW AQUIFER GROUNDWATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Inorganics (mg/L)	**RG	MW-25 10/13/92	MW-25 11/18/93	MW-25 11/14/96	MW-25 2/27/98	MW-27 11/18/93	MW-27 11/14/96	MW-27 2/26/98	MW-28 11/18/93	MW-28 11/14/96	MW-28 2/27/98	MW-29 11/18/93	MW-29 11/14/96	MW-29 2/27/98	MW-30 11/18/93	MW-30 2/27/98	MW-31 11/14/96	MW-31 2/27/98	MW-34 11/14/96	MW-34 2/27/98	MW-37* 11/14/96	MW-37 2/27/98	MW-40 11/14/96	MW-40 2/26/98	MW-40 7/15/98
Aluminum	0.071	-	-	2.2	-	-	0.064	-	-	0.170	-	-	0.760	-	-	-	0.230	-	0.730	-	0.780	-	0.380	-	-
Antimony		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (Total)	0.05	0.012	ND	ND	ND	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.220	0.07	0.21
Arsenic (Dissolved)	0.05	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Barium	2	-	-	0.047	-	-	0.240	-	-	0.280	-	-	0.140	-	-	-	0.047	-	0.044	-	0.034	-	0.085	-	-
Beryllium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.005	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	0.001J	-	ND	-	ND	-	ND	-	-
Calcium	NRG	-	-	14	-	-	89	-	-	140	-	-	42	-	-	-	45	-	19	-	67	-	53	-	-
Chromium (Total)	0.05	0.031	0.011	0.0039	ND	ND	ND	ND	ND	ND	ND	ND	0.070	ND	0.024	ND	0.004J	0.012	0.003J	ND	0.002J	0.013	0.003J	ND	0.039
Chromium (Dissolved)		ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Cobalt	0.22	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	0.001J	-	ND	-	0.005J	-	-
Copper (Total)	1	0.041	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002J	ND	0.003J	ND	ND	ND	0.027	ND	-
Copper (Dissolved)	1	ND	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Cyanide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	1.1	-	-	7.2	-	-	76	-	-	37	-	-	39	-	-	-	25	-	16	-	3.3	-	8.6	-	-
Lead (Total)	0.015	0.036	-	0.003	-	-	ND	-	-	0.008	-	-	ND	-	-	-	ND	-	ND	-	0.008	-	ND	-	-
Lead (Dissolved)		ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	-	-	13	-	-	9.6	-	-	36	-	-	53	-	-	-	14	-	4.9	-	5.7	-	8.1	-	-
Manganese	0.073	-	-	0.250	-	-	1.2	-	-	0.630	-	-	1.4	-	-	-	0.610	-	0.340	-	0.160	-	0.640	-	-
Mercury	0.0011	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	ND	-	ND	-	ND	-	-
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel		-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	0.017J	-	0.007J	-	0.019J	-	0.012J	-	-
Potassium	NRG	-	-	5.7	-	-	4.1	-	-	14	-	-	9.9	-	-	-	6.4	-	2.9	-	4.4	-	6.7	-	-
Selenium	NRG	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	ND	-	0.004J	-	ND	-	0.003J	-	-
Silver		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium		-	-	140	-	-	14	-	-	250	-	-	420	-	-	-	89	-	22	-	15	-	11	-	-
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.026	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	0.011J	-	0.005J	-	0.002J	-	0.004J	-	-
Yttrium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	2.1	-	-	0.021J	-	-	0.027J	-	-	ND	-	-	0.016J	-	-	-	0.009J	-	0.014J	-	0.011J	-	0.027J	-	-
Zirconium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:

* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
HT/LT High Tide/Low Tide
**RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been determined

TABLE 4-3. SHALLOW AQUIFER GROUNDWATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Inorganics (mg/L)	**RG	CW-1 (HT) 12/3/81	CW-1 (LT) 12/3/81	CW-1 11/1/82	CW-1 6/1/83	CW-2 (HT) 12/3/81	CW-2 (LT) 12/3/81	CW-2 11/1/82	CW-2 6/1/83	CW-3 12/3/81	CW-3 12/3/81	CW-3 (HT) 11/1/82	CW-3 (LT) 6/1/83	CW-4 (HT) 12/3/81	CW-4 (LT) 12/3/81	CW-4 11/1/82	CW-4 6/1/83	CW-5 (HT) 12/3/81	CW-5 (LT) 12/3/81	CW-5 11/1/82	CW-5 6/1/83	AW-01 1/7/85
Aluminum	0.071	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Antimony		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Arsenic (Total)	0.05	0.08	0.005	0.08	0.04	0.005	0.008	ND	0.04	0.07	0.02	0.011	0.005	0.036	0.038	0.11	0.06	0.008	0.005	ND	0.01	ND
Arsenic (Dissolved)	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Beryllium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Calcium	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43
Chromium (Total)	0.05	0.05	0.025	ND	ND	0.06	0.04	0.02	ND	ND	ND	0.07	0.05	0.08	0.06	0.01	0.04	0.04	0.04	ND	ND	ND
Chromium (Dissolved)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	0.22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Copper (Total)	1	0.02	0.025	0.02	0.01	0.03	0.01	0.04	ND	0.08	ND	0.03	0.08	0.02	0.02	0.07	0.03	0.05	0.01	0.03	ND	ND
Copper (Dissolved)	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Iron	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Lead (Total)	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Lead (Dissolved)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Manganese	0.073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Mercury	0.0011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Potassium	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Selenium	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Silver		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Sodium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Tin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.026	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Yttrium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	2.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Zirconium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
HT/LT High Tide/Low Tide
**RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been determined

TABLE 4-3. SHALLOW AQUIFER GROUNDWATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Inorganics (mg/L)	**RG	GW-1 1/7/85	GW-2 1/7/85	GW-4 1/7/85	GW-5 1/7/85	B-2 3/11/92	B-3 3/13/92	B-4 3/12/92	B-5 3/11/92	B-6 3/12/92	MW-6 9/8/86	MW-6 3/12/90	MW-6 10/14/91	MW-6 3/12/92	MW-6 10/15/92	MW-6 11/17/93	MW-6 2/26/98	MW-7 9/8/86	MW-7 3/12/90	MW-7 10/14/91	MW-7 3/12/92	MW-7 10/15/92	MW-7 11/17/93	MW-7 2/26/98
Aluminum	0.071	4.8	7.1	3.5	5.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (Total)	0.05	ND	0.022	0.044	ND	0.11	0.049	0.031	ND	0.051	ND	ND	ND	ND	ND	ND	ND	ND	0.015	ND	0.0062	ND	ND	ND
Arsenic (Dissolved)	0.05	-	-	-	-	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-
Barium	2	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.005	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	NRG	80	35	66	42	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (Total)	0.05	ND	ND	ND	0.02	0.10	0.095	0.190	0.006	0.066	ND	ND	ND	ND	ND	ND	ND	ND	0.030	ND	0.031	0.014	ND	ND
Chromium (Dissolved)		-	-	-	-	ND	ND	ND	ND	ND	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-
Cobalt	0.22	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (Total)	1	ND	ND	ND	ND	0.05	0.085	0.13	0.014	0.056	ND	ND	ND	0.012	ND	ND	ND	ND	ND	ND	0.012	ND	ND	ND
Copper (Dissolved)	1	-	-	-	-	ND	ND	ND	0.0064	ND	-	-	-	ND	ND	ND	-	-	-	-	ND	ND	ND	-
Cyanide		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	1.1	91	46	17	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead (Total)	0.015	0.014	0.012	0.016	ND	0.35	0.12	0.21	0.010	0.100	-	-	-	0.0092	ND	-	-	-	-	-	0.023	0.0097	-	-
Lead (Dissolved)		-	-	-	-	ND	ND	ND	ND	ND	-	-	-	ND	ND	-	-	-	-	-	ND	ND	-	-
Magnesium	NRG	48	8	160	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	0.073	2	1.1	0.3	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	0.0011	0.0002	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	NRG	14	6	49	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	NRG	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium		230	9	1400	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.026	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yttrium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	2.1	0.04	0.06	0.04	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zirconium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- - Not Analyzed
- HT/LT High Tide/Low Tide
- **RG Shaded Cells Exceed Health Based Remediation Goal
- NRG No Remediation Goal has been determined

TABLE 4-3. SHALLOW AQUIFER GROUNDWATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters Inorganics (mg/L)	**RG	MW-8 9/8/86	MW-8 3/12/90	MW-8 10/14/91	MW-8 3/12/92	MW-8 10/15/92	MW-8 11/17/93	MW-8 11/14/96	MW-8 2/26/98	MW-9 9/8/86	MW-9 3/12/90	MW-9 10/14/91	MW-9 3/11/92	MW-9 10/15/92	MW-9 11/17/93	MW-9 2/27/98	MW-10 3/11/92	MW-10 10/14/92	MW-10 11/17/93	MW-10 2/26/98	MW-11 11/14/96	MW-12 11/17/93	MW-12 2/26/98
Aluminum	0.071	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	7.7	-	-
Antimony		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (Total)	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND	ND	ND	0.049	0.017	0.077	0.048	0.05	0.017	0.012	0.029	0.013
Arsenic (Dissolved)	0.05	-	-	-	ND	ND	ND	-	-	-	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	-
Barium	2	-	-	-	-	-	-	0.050	-	-	-	-	-	-	-	-	-	-	-	-	0.170	-	-
Beryllium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.005	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-
Calcium	NRG	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	78	-	-
Chromium (Total)	0.05	ND	ND	ND	0.015	0.024	ND	ND	ND	ND	0.020	ND	ND	ND	ND	ND	0.059	0.019	ND	ND	0.015	0.024	ND
Chromium (Dissolved)		-	-	-	ND	ND	ND	-	-	-	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	-
Cobalt	0.22	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	0.007J	-	-
Copper (Total)	1	ND	ND	ND	0.012	0.026	ND	ND	ND	ND	ND	ND	0.007	ND	ND	ND	0.091	ND	ND	ND	0.051	0.043	ND
Copper (Dissolved)	1	-	-	-	ND	ND	ND	-	-	-	-	-	ND	ND	ND	-	ND	ND	ND	-	-	ND	-
Cyanide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	1.1	-	-	-	-	-	-	15	-	-	-	-	-	-	-	-	-	-	-	-	69	-	-
Lead (Total)	0.015	-	-	-	0.016	0.038	-	ND	-	-	-	-	ND	ND	-	-	0.084	0.018	-	-	0.032	-	-
Lead (Dissolved)		-	-	-	ND	ND	-	-	-	-	-	-	ND	ND	-	-	ND	ND	-	-	-	-	-
Magnesium	NRG	-	-	-	-	-	-	8.9	-	-	-	-	-	-	-	-	-	-	-	-	18	-	-
Manganese	0.073	-	-	-	-	-	-	0.240	-	-	-	-	-	-	-	-	-	-	-	-	2.0	-	-
Mercury	0.0011	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	0.00042	-	-
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel		-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-
Potassium	NRG	-	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-	-	-	-	15	-	-
Selenium	NRG	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	ND	-	-
Silver		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium		-	-	-	-	-	-	69	-	-	-	-	-	-	-	-	-	-	-	-	33	-	-
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.026	-	-	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	0.030J	-	-
Yttrium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	2.1	-	-	-	-	-	-	0.032	-	-	-	-	-	-	-	-	-	-	-	-	0.092	-	-
Zirconium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- HT/LT High Tide/Low Tide
- **RG Shaded Cells Exceed Health Based Remediation Goal
- NRG No Remediation Goal has been determined

TABLE 4-4

TABLE 4-4. SHALLOW AQUIFER GROUNDWATER SAMPLES - PESTICIDES AND MISCELLANEOUS ANALYSIS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L) Pesticides/PCB Compounds	*RG	AW-01 1/7/85	GW-1 1/7/85	GW-2 1/7/85	GW-4 1/7/85	GW-5 1/7/85	MW-6 10/9/90	MW-6 10/14/91	MW-6 5/14/96	MW-7 10/9/90	MW-7 10/14/91	MW-7 5/14/96	MW-8 10/9/90	MW-8 10/14/91	MW-8 5/14/96	MW-9 10/9/90	MW-9 10/14/91	MW-9 5/14/96	MW-10 5/14/96	MW-11 5/14/96	MW-11 11/14/96	MW-12 5/14/96
Aldrin		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDD (P,P'-DDD)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDE (P,P'-DDE)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDT (P,P'-DDT)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-BHC		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beta-BHC		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane (Tech, Mixture) /1		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delta-BHC		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan I (Alpha)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan II (Beta)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan Sulfate		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Aldehyde		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Ketone		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-BHC (Lindane)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1016 (Aroclor 1016)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1221 (Aroclor 1221)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1232 (Aroclor 1232)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1242 (Aroclor 1242)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1248 (Aroclor 1248)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1254 (Aroclor 1254)		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1260 (Aroclor 1260)	0.0005	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	-
Toxaphene		ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordene /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-Chlordene /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Hydroxychlordene /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-Chlordane /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-Nonachlor /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordane /2	0.00005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0012J	-
Cis-Nonachlor /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Analysis																						
Chloride	250	-	-	-	-	-	530	310	190	210	200	110	110	130	130	120	120	86	10	33	-	6.2
Total Kjeldahl Nitrogen-N	NRG	-	-	-	-	-	11	11	-	7.2	8.3	-	10	9.7	-	6.7	6.3	-	-	-	-	-
Nitrate + Nitrite-N	NRG	-	-	-	-	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	-	-	-	-
Total Nitrogen	NRG	-	-	-	-	-	11	11	-	7.2	8.3	-	10	9.7	-	6.7	6.3	-	-	-	-	-
Total Phosphorus	NRG	-	-	-	-	-	1	2	-	0.47	0.72	-	0.51	0.78	-	0.35	0.89	-	-	-	-	-
Total Organic Carbon	NRG	-	-	-	-	-	13	16	-	22	22	-	26	27	-	20	20	-	-	-	-	-

Note:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material
- ND Not Detected
- - Not Analyzed
- *RG Shaded Cells Exceed Health Based Remediation Goal
- NRG No Remediation Goal has been Determined

TABLE 4-4. SHALLOW AQUIFER GROUNDWATER SAMPLES - PESTICIDES AND MISCELLANEOUS ANALYSIS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L) Pesticides/PCB Compounds	**RG	MW-13 5/14/96	MW-14 5/14/96	MW-15 5/14/96	MW-16 5/14/96	MW-17 5/14/96	MW-18 5/14/96	MW-19 5/14/96	MW-20 5/14/96	MW-21 5/14/96	MW-22 5/14/96	MW-23 5/14/96	MW-24 5/14/96	MW-25 5/14/96	MW-26 5/14/96	MW-27 5/14/96	MW-28 5/14/96	MW-29 5/14/96	MW-30 5/14/96	MW-34 11/14/96	MW-37* 11/14/96
Aldrin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDD (P,P'-DDD)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDE (P,P'-DDE)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDT (P,P'-DDT)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-BHC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beta-BHC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane (Tech, Mixture) /1		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delta-BHC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dieldrin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan I (Alpha)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan II (Beta)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan Sulfate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Aldehyde		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Ketone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-BHC (Lindane)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1016 (Aroclor 1016)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1221 (Aroclor 1221)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1232 (Aroclor 1232)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1242 (Aroclor 1242)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1248 (Aroclor 1248)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1254 (Aroclor 1254)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1260 (Aroclor 1260)	0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00010N	ND
Toxaphene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordene /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-Chlordene /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Hydroxychlordene /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-Chlordane /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-Nonachlor /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordane /2	0.00005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND
Cis-Nonachlor /2		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Analysis																					
Chloride	250	440	160	25	480	320	180	33	140	55	340	200	210	300	340	9.8	350	1000	120	-	-
Total Kjeldahl Nitrogen-N	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	NRG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material
- ND Not Detected
- \- Not Analyzed
- **RG Shaded Cells Exceed Health Based Remediation Goal
- NRG No Remediation Goal has been Determined

TABLE 4-5

TABLE 4-5. SHALLOW AQUIFER GROUNDWATER SAMPLES- HYDROCARBONS SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY

Parameters (mg/L) Hydrocarbons	MW-6 11/17/93	MW-18 11/17/93	MW-27 11/17/93
Hydrocarbons as Kerosene	ND	ND	ND
Hydrocarbons as Heavy Oils	ND	ND	ND
Hydrocarbons as Mineral Spirits	ND	ND	ND
Hydrocarbons as Varsol	ND	ND	ND
Hydrocarbons as Fuel Oil/Diesel	ND	ND	ND
Hydrocarbons as Gasoline	ND	ND	ND

Note:
ND Not Detected

TABLE 5-1

TABLE 5-1. INTERMEDIATE AQUIFER GROUNDWATER SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L)	*RG	MW-8A	MW-8A	MW-8A	MW-8A	MW-11A	MW-11A	MW-11A	MW-11A	MW-11B	MW-11B	MW-14A	MW-14A	MW-19A	MW-19A	MW-19A	MW-20A	MW-20A	MW-20A	MW-22A	MW-22A	MW-22A	MW-24A	MW-24A	MW-24A	MW-28A	MW-28A	MW-28A	MW-29A	MW-29A	MW-29A	MW-32	MW-32	MW-35	MW-35	MW-38	MW-38	MW-41	MW-41
Extractable Organics		10/15/92	11/18/93	11/14/96	2/26/98	10/16/92	11/18/93	11/14/96	2/27/98	11/18/93	11/14/96	11/18/93	2/27/98	10/16/92	11/18/93	2/26/98	11/18/93	11/14/96	2/26/98	11/18/93	11/14/96	2/26/98	11/18/93	11/14/96	2/27/98	11/18/93	11/14/96	2/27/98	11/18/93	11/14/96	2/27/98	11/14/96	2/27/98	11/14/96	2/27/98	11/14/96	2/27/98	11/14/96	2/26/98
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	0.007JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
2,4,6-Trichlorophenol		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
2,4-Dimethylphenol	0.073	ND	ND	ND	ND	ND	ND	0.003J	ND	ND	0.054	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
2-Chlorophenol		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
2-Methylnaphthalene	0.028	-	-	ND	ND	-	-	0.045	ND	-	0.320	-	0.29	-	-	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	0.130	ND	ND	ND	ND	0.42	ND	ND	ND	ND
4-Chloro-3-Methylphenol		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Acenaphthene	0.08	ND	ND	ND	ND	0.05	0.076	0.038	0.035	0.081	0.260	0.41	0.23	ND	ND	ND	ND	0.003J	ND	0.012	0.005J	ND	ND	ND	ND	ND	0.020J	0.015	0.54	0.160	0.093	ND	0.017	0.110	0.330	ND	ND	ND	ND
Acenaphthylene	0.21	-	-	ND	ND	-	-	ND	ND	-	0.003J	-	ND	-	-	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	0.033	ND	ND	ND	ND	ND	ND	ND	ND
Acridinone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.040JN	-	-	-	-	-
Aminofluorenone		-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	2.1	ND	ND	ND	ND	0.02	ND	0.003J	ND	ND	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.007J	ND	ND	ND	ND	ND
Benzo(a)Anthracene	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.001J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Benzo(b)Fluoranthene		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene		-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND
Benzo(k)Fluoranthene		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Benzofuranone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006JN	-	-	-	-	-	-	-
Benzothiophene		-	-	-	-	-	-	0.005JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl		-	-	-	-	-	-	-	-	-	0.005JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Caprolatam		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.004JN	-	-	-
Carbazole	0.01	ND	ND	ND	ND	0.04	ND	0.017J	0.017	ND	0.095J	ND	0.12	ND	ND	ND	ND	ND	ND	ND	0.001J	ND	ND	ND	ND	ND	ND	ND	0.019	0.072	ND	ND	ND	0.110	0.14	ND	ND	ND	ND
Chrysene		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Cresol (ortho)		-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND
Cresol m&p		-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND
Dibenzo(a,h)Anthracene		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Dibenzofuran	0.015	-	-	ND	ND	-	-	0.021	0.018	-	0.150	-	0.14	-	-	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	0.003J	ND	-	0.097	0.014	ND	ND	0.040	0.15	ND	ND	ND	ND
Dihydroindeniol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.060JN	-	-	-	-	-
Dihydroindenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.200JN	-	-	-	-	-
Dimethylnaphthalene		-	-	-	-	-	-	0.004JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.060JN	-	-	-	-	-
Dimethylnaphthalene (3 Isomers)		-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylphenol		-	-	-	-	-	-	-	-	-	0.002JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	0.28	ND	ND	ND	ND	0.01	ND	0.004J	ND	ND	0.021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003J	ND	ND	ND	ND	ND	ND	0.007J	ND	ND	ND	ND	ND
Fluorene	0.28	-	-	ND	ND	-	-	0.022	0.019	-	0.170	-	0.12	-	-	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	0.003J	ND	-	0.095	0.014	ND	ND	0.096	0.15	ND	ND	ND	ND
Hydroxybiphenyl		-	-	-	-	-	-	-	-	-	0.003JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
(Methylethylidene) Biphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.010JN	-	0.020JN	-	-	-	0.020JN	-
Methylbenzonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.040JN	-	-	-	-	-
Methylbiphenyl		-	-	-	-	-	-	-	-	-	0.002JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindanol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-
Methylnaphthalene		-	-	-	-	-	-	0.010JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylquinolinone		-	-	-	-	-	-	-	-	-	0.004JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.021	ND	ND	ND	ND	ND	0.31	0.086	ND	ND	0.880	3.3	0.96	ND	ND	ND	ND	ND	ND	0.018	0.009J	0.011	ND	ND	ND	ND	0.002J	ND	ND	0.054	ND	ND	ND	ND	0.84	ND	ND	ND	ND
Naphthalenecarbonitrile		-	-	-	-	-	-	-	-	-	0.003JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.040JN	-	-	-	-	-
Naphthalenol		-	-	-	-	-	-	-	-	-	0.002JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
p-Chloro-m-cresol		-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND
Pentachlorophenol		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Phenanthrene	0.21	ND	ND	ND	ND	0.06	0.047	0.017J	ND	0.039	0.089J	ND	0.11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.050J	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthridinone		-	-	-	-	-	-	0.007JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenol		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Pyrene	0.21	-	-	ND	ND	-	-	ND	ND	-	0.012J	-	ND	-	-	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	ND	0.003J	ND	ND	ND	ND	ND
Tetrachlorophenols		ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	ND	-	ND	-	ND
Thymol		-	-	-	-	-	-	-	-	-	0.003JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylphenol		-	-	-	-	-	-	-	-	-	0.003JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
*RG *Shaded Cells Exceed Health Based Remediation Goal*

TABLE 5-2

TABLE 5-2. INTERMEDIATE AQUIFER GROUNDWATER SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L) Purgeable Organics	*RG	MW-8A 10/15/92	MW-8A 11/18/93	MW-8A 11/14/96	MW-8A 2/26/98	MW-11A 10/16/92	MW-11A 11/18/93	MW-11A 11/14/96	MW-11A 2/27/98	MW-11B 11/18/93	MW-11B 11/14/96	MW-14A 11/18/93	MW-14A 2/27/98	MW-19A 10/16/92	MW-19A 11/18/93	MW-19A 2/26/98	MW-20A 11/18/93	MW-20A 11/14/96	MW-20A 2/26/98	MW-22A 11/18/93	MW-22A 11/14/96	MW-22A 2/26/98	MW-24A 11/18/93	MW-24A 11/14/96	MW-24A 2/27/98	MW-28A 11/18/93	MW-28A 11/14/96	MW-28A 2/27/98	MW-29A 11/18/93	MW-29A 11/14/96	MW-29A 2/27/98	MW-32 11/14/96	MW-32 2/27/98	MW-35 11/14/96	MW-35 2/27/98	MW-38* 11/14/96	MW-38* 2/27/98	MW-41 11/14/96	MW-41 2/26/98
1,1,1-Trichloroethane	0.2	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	-	-	0.001J	-	ND	-
1,1,2,2-Tetrachloroethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane		ND	ND	ND	-	ND	ND	0.004J	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	-	-	ND	-	ND	-
1,1-Dichloroethane	0.003	ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
2-Chloroethylvinyl Ether		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Acetone	0.7	-	-	1.7	-	-	-	ND	-	-	ND	-	-	-	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND	-
Alkane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020JN	-	-	-
Benzene	0.001	ND	ND	ND	ND	0.003	ND	ND	ND	ND	0.008J	ND	0.0012	ND	ND	0.0013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.004J	0.0035	ND	ND	ND	ND
Benzofuran		-	-	-	-	-	-	-	-	-	0.008JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.009JN	-	-	-	-	-
Benzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.050JN	-	-	-	-	-
Bromodichloroethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	0.00056	-	-	ND	-	-	-	ND	-	-	ND	-	-	-	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	0.005J	-	0.002J	-	ND	-	ND	-
Bromomethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Chlorobenzene		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Chloroethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Chloroform	0.00053	0.002	-	ND	-	ND	-	ND	-	-	ND	-	-	0.001	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	0.044	-	0.016	-	ND	-	ND	-
Chloromethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
CyclopentathiapyNan		-	-	0.700JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Dichloromethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Dihydromethylindene		-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylindene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.050JN	-	-	-	-	-
Ethyl Benzene	0.029	ND	ND	ND	ND	0.004	ND	ND	ND	ND	0.017	0.018	0.0084	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0013	ND	ND	0.026	0.037	ND	ND	-	ND
Ethylidimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-
Ethylidimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005JN	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-
Fluorotrichloromethane		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Indane		-	-	0.070JN	-	-	-	0.080JN	-	-	0.400JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.500JN	-	-	-	-	-
(Methylethyl) Benzene		-	-	-	-	-	-	-	-	-	0.007JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.007JN	-	-	-	-	-
(Methylpropenyl) Benzene		-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M/P-Xylene	0.53	ND	ND	-	ND	0.007	ND	-	0.0015	ND	-	0.020	0.0069	ND	ND	ND	ND	-	ND	0.0061	-	0.001	ND	-	ND	ND	-	ND	ND	-	0.0022	-	ND	-	0.028	-	ND	-	ND
Methyl benzofuran (2 Isomers)		-	-	-	-	-	-	-	-	-	0.090JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran		-	-	-	-	-	-	0.006JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.060JN	-	-	-	-	-
Methylbenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.020JN	-	-	-	-	-
Methylene Chloride		-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	ND	-	ND
Methyl-T-Butyl Ether (MTBE)		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
o-Xylene	0.53	ND	ND	-	ND	0.003	ND	-	ND	ND	-	0.0087	0.0022	ND	ND	ND	ND	-	ND	0.0060	-	0.0022	ND	-	ND	ND	-	ND	ND	-	0.001	-	ND	-	0.017	-	ND	-	ND
Propanol		-	-	8JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	1	ND	ND	-	ND	0.001	ND	-	ND	ND	-	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	-	ND	-	ND	-	0.0024	-	ND	-	ND
Total Xylenes	0.53	-	-	ND	-	-	-	ND	-	-	0.025	-	-	-	-	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	ND	-	0.032	-	ND	-	ND	-
Trans-1,2-Dichloroethylene		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Trichloroethene		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene		-	-	-	-	-	-	-	-	-	0.010JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene (2 Isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.060JN	-	-	-	-	-
Vinyl Chloride		ND	ND	-	-	ND	ND	-	-	ND	-	ND	-	ND	ND	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-

Note:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- *RG Shaded Cells Exceed Health Based Remediation Goal

TABLE 5-3

TABLE 5-3. INTERMEDIATE AQUIFER GROUNDWATER SAMPLES - INORGANICS AND CHLORIDE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L) Inorganics	**RG	MW-8A 10/15/92	MW-8A 11/18/93	MW-8A 5/14/96	MW-8A 11/14/96	MW-8A 2/26/98	MW-11A 10/16/92	MW-11A 11/18/93	MW-11A 5/14/96	MW-11A 11/14/96	MW-11A 2/27/98	MW-11B 11/18/93	MW-11B 5/14/96	MW-11B 11/14/96	MW-14A 11/18/93	MW-14A 5/14/96	MW-14A 2/27/98	MW-19A 10/16/92	MW-19A 5/14/96	MW-19A 11/18/93	MW-19A 2/26/98	MW-20A 11/18/93	MW-20A 5/14/96	MW-20A 11/14/96	MW-20A 2/26/98
Aluminum	3.7	-	-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-
Arsenic (Total)	0.05	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	0.0050	-	ND	ND	ND	-	ND	ND
Arsenic (Dissolved)	0.05	ND	ND	-	-	-	ND	ND	-	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	-	-
Barium	2	-	-	-	0.027	-	-	-	-	0.016	-	-	-	0.029	-	-	-	-	-	-	-	-	-	0.013	-
Cadmium	0.005	-	-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-
Calcium	NRG	-	-	-	48	-	-	-	-	3.8	-	-	-	52	-	-	-	-	-	-	-	-	-	43	-
Chromium (Total)	0.05	ND	ND	-	ND	ND	0.012	ND	-	ND	ND	ND	-	ND	ND	-	ND	0.011	-	ND	ND	ND	-	ND	ND
Chromium (Dissolved)	0.05	ND	ND	-	-	-	ND	ND	-	-	-	ND	-	-	ND	-	-	ND	-	ND	-	ND	-	-	-
Copper (Total)	1	ND	ND	-	ND	ND	ND	ND	-	ND	ND	ND	-	ND	ND	-	ND	ND	-	ND	ND	ND	-	ND	ND
Copper (Dissolved)	1	ND	ND	-	-	-	0.0095	ND	-	-	-	ND	-	-	ND	-	-	0.011	-	ND	-	ND	-	-	-
Iron	1.1	-	-	-	3.6	-	-	-	-	1.9	-	-	-	0.220	-	-	-	-	-	-	-	-	-	2.2	-
Lead (Total)	0.015	-	-	-	0.012	-	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-
Lead (Dissolved)	0.015	ND	-	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	ND	-	-	-	-	-	-	-
Magnesium	NRG	-	-	-	3.2	-	-	-	-	2.7	-	-	-	1.7	-	-	-	-	-	-	-	-	-	4.1	-
Manganese	0.073	-	-	-	0.078	-	-	-	-	0.062	-	-	-	ND	-	-	-	-	-	-	-	-	-	0.330	-
Nickel	0.1	-	-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-
Potassium	NRG	-	-	-	3.8	-	-	-	-	0.690	-	-	-	0.990J	-	-	-	-	-	-	-	-	-	3.5	-
Sodium	NRG	-	-	-	26	-	-	-	-	5.9	-	-	-	7.2	-	-	-	-	-	-	-	-	-	10	-
Vanadium	0.026	-	-	-	ND	-	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-
Zinc	2.1	-	-	-	0.027	-	-	-	-	0.021	-	-	-	ND	-	-	-	-	-	-	-	-	-	ND	-
Chloride	NRG	-	-	36	-	-	-	-	8.1	-	-	-	11	-	-	21	-	-	33	-	-	-	15	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
**RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been Determined

TABLE 5-3. INTERMEDIATE AQUIFER GROUNDWATER SAMPLES - INORGANICS AND CHLORIDE
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L) Inorganics	*RG	MW-22A 11/18/93	MW-22A 5/14/96	MW-22A 11/14/96	MW-22A 2/26/98	MW-24A 11/18/93	MW-24A 5/14/96	MW-24A 11/14/96	MW-24A 2/27/98	MW-28A 11/18/93	MW-28A 5/14/96	MW-28A 11/14/96	MW-28A 2/27/98	MW-29A 11/18/93	MW-29A 5/14/96	MW-29A 11/14/96	MW-29A 2/27/98	MW-32 11/14/96	MW-32 2/27/98	MW-35 11/14/96	MW-35 2/27/98	MW-39* 11/14/96	MW-39* 2/27/98	MW-41 11/14/96	MW-41 2/26/98
Aluminum	3.7	-	-	0.094	-	-	-	0.081	-	-	-	ND	-	-	-	ND	-	0.220	-	0.350	-	0.160	-	0.380	-
Arsenic (Total)	0.05	ND	-	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic (Dissolved)	0.05	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-
Barium	2	-	-	0.033	-	-	-	0.077	-	-	-	0.015	-	-	-	0.018	-	0.034	-	0.020	-	0.061	-	0.034	-
Cadmium	0.005	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	ND	-	ND	-	ND	-	0.001J	-
Calcium	NRG	-	-	12	-	-	-	17	-	-	-	23	-	-	-	52	-	29	-	41	-	47	-	28	-
Chromium (Total)	0.05	ND	-	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	ND	ND	0.006J	ND	0.004J	ND	0.002J	ND	0.003J	ND
Chromium (Dissolved)	0.05	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-
Copper (Total)	1	ND	-	ND	ND	ND	-	ND	ND	ND	-	ND	ND	ND	-	ND	ND	0.004J	ND	0.017J	ND	ND	ND	0.006J	ND
Copper (Dissolved)	1	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	-	-	-	-	-	-	-	-
Iron	1.1	-	-	3.6	-	-	-	5.0	-	-	-	1.6	-	-	-	ND	-	0.380	-	0.390	-	2.6	-	1.2	-
Lead (Total)	0.015	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	0.022	-	0.010	-	ND	-	0.014	-
Lead (Dissolved)	0.015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	NRG	-	-	4.2	-	-	-	4.1	-	-	-	2.1	-	-	-	5.4	-	2.6	-	4.4	-	3.9	-	3.8	-
Manganese	0.073	-	-	0.073	-	-	-	0.160	-	-	-	0.041	-	-	-	0.037	-	0.037	-	0.041	-	0.240	-	0.310	-
Nickel	0.1	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	0.004J	-	0.004J	-	0.020J	-	0.041	-
Potassium	NRG	-	-	2.0	-	-	-	1.4	-	-	-	2.1	-	-	-	2.1	-	5.6	-	2.9	-	2.9	-	3.1	-
Sodium	NRG	-	-	30	-	-	-	29	-	-	-	8.6	-	-	-	20	-	43	-	25	-	19	-	23	-
Vanadium	0.026	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	0.003J	-	0.003J	-	0.002J	-	ND	-
Zinc	2.1	-	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	ND	-	0.010	-	0.009J	-	0.024	-	0.023	-
Chloride	NRG	-	31	-	-	-	37	-	-	-	13	-	-	-	29	-	-	-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
*RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been Determined

TABLE 6-1

TABLE 6-1. DEEP AQUIFER GROUNDWATER SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L) Extractable Organics	**RG	MW-33 11/14/96	MW-33 2/27/98	MW-36 11/14/96	MW-36 2/27/98	MW-39* 11/14/96	MW-39* 2/27/98	MW-42 11/14/96	MW-42 2/26/98
1-Methynaphthalene		0.009JN	-	-	-	-	-	-	-
2 - Methylnaphthalene	0.028	-	ND	-	0.74	-	ND	-	ND
2,4,5-Trichlorophenol		-	ND	-	ND	-	ND	-	ND
2,4,6-Trichlorophenol		-	ND	-	ND	-	ND	-	ND
2,4-Dimethylphenol		-	ND	-	ND	-	ND	-	ND
2,4-Dinitrophenol		-	ND	-	ND	-	ND	-	ND
2-Chlorophenol		-	ND	-	ND	-	ND	-	ND
4-Chloro-3-Methylphenol		-	-	-	-	-	-	-	-
Acenaphthene	0.08	0.020	0.054	0.045	ND	ND	ND	ND	ND
Acenaphthylene		-	ND	-	ND	-	ND	-	ND
Anthracene		-	ND	-	ND	-	ND	-	ND
Benzo(a)Anthracene		-	ND	-	ND	-	ND	-	ND
Benzo(a)Pyrene		-	ND	-	ND	-	ND	-	ND
Benzo(b)Fluoranthene		-	ND	-	ND	-	ND	-	ND
Benzo(b,k)Fluoranthene		-	ND	-	ND	-	ND	-	ND
Benzo(k)Fluoranthene		-	ND	-	ND	-	ND	-	ND
Benzofuranone		0.006JN	-	-	-	-	-	0.009JN	-
Benzonaphthothiophene		-	-	0.007JN	-	-	-	-	-
Benzopyranone		-	-	0.010JN	-	-	-	-	-
Benzothiophene		-	-	0.007JN	-	-	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	-	-	-
Carbazole	0.01	0.003J	ND	0.003J	ND	ND	ND	ND	ND
Chrysene		-	ND	-	ND	-	ND	-	ND
Cresol (ortho)		-	ND	-	ND	-	ND	-	ND
Cresol m&p		-	ND	-	ND	-	ND	-	ND
Dibenzo(a,h)Anthracene		-	ND	-	ND	-	ND	-	ND
Dihydrobenzothiophene		0.002JN	-	-	-	-	-	-	-
Dihydroindenediol		-	-	0.020JN	-	-	-	-	-
Dihydroindenol		-	-	0.030JN	-	-	-	-	-
Dihydroindenone		-	-	0.030JN	-	-	-	-	-
Dimethylnaphthalene		-	-	0.004JN	-	-	-	-	-
Fluoranthene	0.28	ND	ND	0.003J	ND	ND	ND	ND	ND
Fluorene	0.28	0.002J	ND	0.015	ND	ND	ND	ND	ND
Fluorenol		-	-	0.010JN	-	-	-	-	-
Hydroxbiphenyl		-	-	0.030JN	-	-	-	-	-
Hydroxybenzaldehyde		-	-	0.020JN	-	-	-	-	-
Indeno(1,2,3-Cd)Pyrene		-	ND	-	ND	-	ND	-	ND
Iodonaphthol		-	-	0.050JN	-	-	-	-	-
(Methylethylidene) Biphenol		0.030JN	-	0.050JN	-	-	-	0.020JN	-
Naphthalene	0.021	-	ND	-	3.1	-	ND	-	ND
Naphthalenol		-	-	0.008JN	-	-	-	-	-
p-Chloro-m-cresol		-	ND	-	ND	-	ND	-	ND
Pentachlorophenol		-	ND	-	ND	-	ND	-	ND
Phenanthrene		-	ND	-	ND	-	ND	-	ND
Phenol	0.3	-	ND	-	ND	-	0.015	-	ND
Phenylpropenal		-	-	0.020JN	-	-	-	-	-
Pyrene	0.21	ND	ND	0.002J	ND	ND	ND	ND	ND
Tetrachlorophenols		-	ND	-	ND	-	ND	-	ND

Note:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material
- ND Not Detected
- \- Not Analyzed.
- **RG Shaded Cells Exceed Health Based Remediation Goal

TABLE 6-2

TABLE 6-2. DEEP AQUIFER GROUNDWATER SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L) Purgeable Organics	**RG	MW-33 11/14/96	MW-33 2/27/98	MW-36 11/14/96	MW-36 2/27/98	MW-39* 11/14/96	MW-39* 2/27/98	MW-42 11/14/96	MW-42 2/26/98
1,1,1-Trichloroethane		-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane		-	-	-	-	-	-	-	-
1,1,2-Trichloroethane		-	-	-	-	-	-	-	-
1,1-Dichloroethane		-	-	-	-	-	-	-	-
1,1-Dichloroethene		-	-	-	-	-	-	-	-
1,2-Dibromomethane		-	-	-	-	-	-	-	-
1,2-Dichloroethane		-	-	-	-	-	-	-	-
1,2-Dichloropropane		-	-	-	-	-	-	-	-
2-Chloroethylvinyl Ether		-	-	-	-	-	-	-	-
Benzene		-	ND	-	ND	-	ND	-	ND
Bromodichloroethane		-	-	-	-	-	-	-	-
Bromodichloromethane	0.00056	ND	-	0.005J	-	ND	-	ND	-
Bromomethane		-	-	-	-	-	-	-	-
Carbon Tetrachloride		-	-	-	-	-	-	-	-
Chlorobenzene		-	-	-	-	-	-	-	-
Chloroethane		-	-	-	-	-	-	-	-
Chloroform	0.00053	ND	-	0.028	-	ND	-	ND	-
Chloromethane		-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		-	-	-	-	-	-	-	-
Dibromochloromethane		-	-	-	-	-	-	-	-
Dichlorodifluoromethane		-	-	-	-	-	-	-	-
Dichloromethane		-	-	-	-	-	-	-	-
Dihydromethylindene		-	-	0.006JN	-	-	-	-	-
Ethyl Benzene	0.029	ND	ND	0.003J	0.016	ND	ND	ND	ND
Fluorotrichloromethane		-	-	-	-	-	-	-	-
Indane		0.080JN	-	0.050JN	-	-	-	-	-
M/P-Xylene	0.53	-	0.002	-	0.024	-	ND	-	ND
Methylene Chloride		-	ND	-	ND	-	ND	-	ND
Methyl-T-Butyl Ether (MTBE)		-	-	-	-	-	-	-	-
o-Xylene	0.53	-	0.001	-	0.011	-	ND	-	ND
Toluene	1	-	ND	-	0.0022	-	ND	-	ND
Total Xylenes	0.53	ND	-	0.004J	-	ND	-	ND	-
Trans-1,2-Dichloroethylene		-	-	-	-	-	-	-	-
Trichloroethene		-	-	-	-	-	-	-	-
Trimethylbenzene		-	-	0.010JN	-	-	-	-	-
Vinyl Chloride		-	-	-	-	-	-	-	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed.
**RG Shaded Cells Exceed Health Based Remediation Goal

TABLE 6-3

TABLE 6-3. DEEP GROUNDWATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA

Parameters (mg/L) Inorganics	**RG	MW-33 11/14/96	MW-33 2/27/98	MW-36 11/14/96	MW-36 2/27/98	MW-39* 11/14/96	MW-39* 2/27/98	MW-42 11/14/96	MW-42 2/26/98
Aluminum	3.7	0.071	-	0.270	-	0.095	-	0.049	-
Arsenic (Total)	0.05	-	ND	-	ND	-	ND	-	ND
Arsenic (Dissolved)	0.05	-	-	-	-	-	-	-	-
Barium	2	0.043	-	0.088	-	0.012	-	0.200	-
Calcium	NRG	52	-	32	-	45	-	51	-
Chromium (Total)	0.05	ND	ND	0.004J	ND	0.001J	ND	ND	ND
Chromium (Dissolved)	0.05	-	-	-	-	-	-	-	-
Copper (Total)	1	0.006J	ND	0.021J	ND	0.008J	ND	0.002J	ND
Copper (Dissolved)	1	-	-	-	-	-	-	-	-
Iron	1.1	0.150	-	0.220	-	0.140	-	0.055	-
Lead	0.015	0.012	-	0.022	-	0.003J	-	0.020	-
Magnesium	NRG	6.9	-	2.6	-	6.0	-	4.6	-
Manganese	0.073	0.034	-	0.016	-	0.021	-	0.006J	-
Nickel	0.1	0.003J	-	ND	-	ND	-	ND	-
Potassium	NRG	6.2	-	9.0	-	2.8	-	19	-
Sodium	NRG	52	-	54	-	11	-	46	-
Vanadium	0.026	ND	-	0.006J	-	ND	-	0.002J	-
Zinc	2.1	0.013J	-	0.022	-	0.003J	-	0.004J	-

Note:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material
ND Not Detected
- Not Analyzed
**RG Shaded Cells Exceed Health Based Remediation Goal
NRG No Remediation Goal has been Determined

TABLE 7-1

TABLE 7-1. SEDIMENT SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg)		RB-5	*BK-S1	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-10A	SS-11	SS-12	SS-12 DUP	SS-13	*SS14	SS15	SS16	SS16-DUP	SS17	SS18	SS19	SS20	SS21	SS22	SS23	SS24
Extractable Organics	**RG	1/7/85	1/7/85	12/9/92	12/9/92	12/9/92	12/9/92	12/9/92	12/9/92	12/9/92	12/14/92	12/14/92	12/14/92	1/19/93	12/14/92	2/15/96	2/15/96	2/15/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96
(3- and/or 4-) Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	460	0.019	0.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	460	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	940	ND	ND	0.51	ND	ND	0.59	4.4	2.9	44	1.0	32	ND	3.3	ND	1.8	1.9	ND	24	ND	ND	ND	ND	1.1	ND	ND	11	ND	ND	ND
Acenaphthylene	460	0.030J	ND	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetyloxyhexanone		2JN	2JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aminofluorenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aniline		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	4600	0.070J	ND	ND	ND	ND	ND	45	36	10	ND	49	ND	ND	ND	1.1	ND	ND	13	ND	ND	ND	ND	2.2	20	ND	40	1.8	17	ND
Anthracenecarbonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzidine		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.88	0.078	ND	1.1	0.54	ND	1.1	5.8	7.4	3.2	ND	26	730	7.3	ND	1.9	1.4	2.3	6.4	1.4	ND	ND	1.3	1.7	12	ND	13	ND	ND	ND
Benzo(a)Pyrene	0.33	0.090J	ND	0.42	ND	ND	2.0	3.1	1.9	0.84	ND	9.0	680	2.8	ND	0.99	0.73	ND	6.3	1.3	ND	ND	ND	ND	5.9	ND	ND	ND	ND	ND
Benzo(b)Fluoranthene	0.88	-	-	ND	0.75	ND	ND	ND	ND	ND	ND	15	1800	6.0	ND	2.0	1.5	2.2	8.6	1.8	ND	1.4	1.6	ND	11	ND	11	ND	ND	ND
Benzo(b,k)Fluoranthene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.88	0.11	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.88	0.100J	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i) Perylene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	8.8	-	-	1.5	ND	ND	4.9	3.8	3.6	1.2	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	5.5	ND	ND	ND	ND	ND
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(2 isomers)																														
Benzofluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroisopropyl)Ether		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	46	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 7-1. SEDIMENT SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg) Extractable Organics	*RG	RB-5 1/7/85	*BK-S1 1/7/85	SS-1 12/9/92	SS-2 12/9/92	SS-3 12/9/92	SS-4 12/9/92	SS-5 12/9/92	SS-6 12/9/92	SS-7 12/9/92	SS-8 12/14/92	SS-9 12/14/92	SS-10 12/14/92	SS-10A 1/19/93	SS-11 12/14/92	SS-12 2/15/96	SS-12 DUP 2/15/96	SS-13 2/15/96	*SS14 2/16/96	SS15 2/16/96	SS16 2/16/96	SS16-DUP 2/16/96	SS17 2/16/96	SS18 2/16/96	SS19 2/16/96	SS20 2/16/96	SS21 2/16/96	SS22 2/16/96	SS23 2/16/96	SS24 2/16/96
Carbazole	0.33	-	-	ND	ND	ND	ND	18	4.4	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.7	ND	15	ND	ND	ND
Chrysene	88	0.16	ND	1.1	0.53	ND	1.6	4.5	5.5	1.9	ND	22	920	9.0	ND	2.4	1.6	3.0	5.7	1.2	1.2	1.2	1.4	1.6	15	ND	18	ND	ND	ND
Cresol (ortho)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentapyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)Anthracene	0.33	ND	ND	ND	ND	ND	3.7	ND	ND	ND	ND	0.94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	62	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzothiophene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylfuranone		5JN	8JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylheptanone		-	100JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-Butylphthalate	1560	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octylphthalate		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	620	0.35	0.300J	3.8	0.87	ND	1.8	38	52	26	ND	130	1,300	15	ND	6.8	6.0	10	22	1.1	3.0	3.2	4.7	7.5	60	2.6	54	2.9	55	ND
Fluorene	620	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene (HCB)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexadecanoic Acid		-	0.020JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobiphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexahydrohydroxytrimethyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethyl) Phenanthrenone		-	-																											
Indeno(1,2,3-cd)Pyrene	0.88	ND	ND	ND	ND	ND	2.0	0.67	0.72	ND	ND	3.4	680	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	670	0.060J	0.080J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylchrysene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	620	ND	ND	ND	ND	ND	ND	1.8	ND	44	ND	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Octahydrodimethyl (Methylethenyl)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azulene																														
Pentachlorobiphenyl (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	460	0.07	ND	1.5	0.56	ND	ND	42	36	55	ND	70.0	ND	ND	ND	ND	ND	ND	40	ND	ND	ND	ND	ND	19	ND	31	ND	ND	ND
Phenol		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenylnaphthalene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	460	0.300J	0.500J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachlorophenol		-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetramethylphenanthrene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
*RG Shaded Cells Exceed Preliminary Sediment Remediation Goal

TABLE 7-1. SEDIMENT SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg) Extractable Organics	*RG	*SD-01 11/10/96	SD-03 11/10/96	SD-05 11/8/96	SD-06 11/9/96	SD-07 11/9/96	SD-08 11/9/96	SD-09 11/9/96	SD-10 11/10/96	SD-11 11/10/96	SD-12 11/10/96	SD-13 11/8/96	SD-14 11/8/96	SD-15 11/8/96	SD-16 11/8/96	SD-17 11/8/96	SD-18 11/8/96	SD-19 11/8/96	SD-20 11/8/96
(3- and/or 4-) Methylphenol		ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Biphenyl		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene		-	-	-	20JN	20JN	-	2JN	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	460	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methyl-4,6-Dinitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	460	ND	ND	ND	38	21J	0.340J	4.0J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	0.33	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.260J	ND	ND	ND
4-Chloroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenyl Phenyl Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	940	0.130J	0.140J	ND	31	63	0.590J	6.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	460	ND	0.070J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.210J	ND	ND	ND	ND	ND	ND
Acetyloxyhexanone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aminofluorenone		-	-	-	5JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aniline		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	4600	0.170J	0.340J	0.140J	61	88	7.8	33	0.110J	0.740J	ND	ND	0.780	ND	ND	ND	ND	0.240J	ND
Anthracenecarbonitrile		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.200JN	-
Benzidine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	0.88	0.860	ND	0.260J	33	38	ND	ND	ND	ND	ND	0.170J	0.970	ND	ND	ND	ND	0.550	ND
Benzo(a)Pyrene	0.33	0.780	0.440J	0.250J	10J	11J	0.630J	0.750J	0.180J	0.280J	ND	0.150J	1.4	ND	ND	ND	0.140J	0.880J	0.094J
Benzo(b)Fluoranthene	0.88	1.4J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene		1.4J	0.920J	0.350J	27J	26J	2.2J	1.1J	0.380J	0.690J	ND	0.540J	3.8J	ND	ND	0.051J	0.200J	3.8J	0.130J
Benzo(b and/or k)Fluoranthene	0.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	0.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i) Perylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(k)Fluoranthene	8.8	1.4J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracenone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.100JN	-
Benzofluoranthene (not b or k)		-	-	-	8JN	9JN	-	-	-	-	-	-	0.700JN	-	-	-	-	-	-
Benzofluoranthene (not b or k)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1JN	-
(2 Isomers)																			
Benzofluorene		-	-	-	-	-	0.800JN	-	0.090JN	-	-	-	0.200JN	-	-	-	-	0.200JN	-
Benzofluorene (2 Isomers)		-	-	-	-	-	-	3JN	-	-	-	-	-	-	-	-	-	-	-
Benzofluorene (3 Isomers)		-	-	-	30JN	40JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		0.500JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene		-	-	-	-	-	-	-	0.200JN	-	-	-	-	-	-	-	-	-	-
Benzonaphthothiophene (2 Isomers)		-	-	-	10JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzopyrene (not a)		-	-	-	-	-	-	-	-	-	-	-	0.300JN	-	-	-	-	-	-
Benzyl Alcohol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)Ether		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	46	1.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

TABLE 7-1. SEDIMENT SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg) Extractable Organics	*RG	*SD-01 11/10/96	SD-03 11/10/96	SD-05 11/8/96	SD-06 11/9/96	SD-07 11/9/96	SD-08 11/9/96	SD-09 11/9/96	SD-10 11/10/96	SD-11 11/10/96	SD-12 11/10/96	SD-13 11/8/96	SD-14 11/8/96	SD-15 11/8/96	SD-16 11/8/96	SD-17 11/8/96	SD-18 11/8/96	SD-19 11/8/96	SD-20 11/8/96
Carbazole	0.33	0.200J	0.059J	0.640J	20	9.8J	1.4J	4.8	ND	0.170J	ND	ND	0.100J	ND	ND	ND	ND	ND	ND
Chrysene	88	1.2	0.520J	0.320J	42	46	2.2	3.1J	0.130J	0.450J	ND	0.330J	1.5	ND	ND	ND	0.160J	1.3	0.075J
Cresol (ortho)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyclopentaphenanthrenone		-	-	-	-	-	-	-	-	-	-	-	0.200JN	-	-	-	-	-	-
Cyclopentapyrene		-	-	-	-	-	-	-	-	-	-	-	0.100JN	-	-	-	-	0.300JN	-
Dibenzo(a,h)Anthracene	0.33	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.200J	ND
Dibenzofuran	62	0.082J	ND	ND	21	37	0.860J	6.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzothiophene		-	-	-	7JN	20JN	-	2JN	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethyl Phthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylfuranone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylheptanone		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (2 isomers)		-	-	-	-	20JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylnaphthalene (3 isomers)		-	-	-	-	-	-	4JN	-	-	-	-	-	-	-	-	-	-	-
Di-n-Butylphthalate	1560	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octylphthalate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	620	2.2	1.0	0.580	130	190	5.5	13	0.100J	1.2J	ND	0.240J	1.0	ND	ND	ND	0.170J	0.7	0.065J
Fluorene	620	0.110J	ND	ND	41	89	2.2	9.6	ND	ND	ND	ND	0.069J	ND	ND	ND	ND	ND	ND
Hexachlorobenzene (HCB)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexadecanoic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobiphenyl		-	-	-	-	-	-	-	-	-	-	0.100JN	-	-	-	-	-	-	-
Hexahydrohydroxytrimethyl		-	-	-	-	-	4JN	-	-	-	-	-	-	-	-	-	-	-	-
(Methylethyl) Phenanthrenone																			
Indeno(1,2,3-cd)Pyrene	0.88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene		-	-	-	10JN	40JN	1JN	-	-	-	-	-	-	-	-	-	-	-	-
Methylanthracene (2 isomers)		-	-	-	-	-	-	4JN	-	-	-	-	-	-	-	-	-	-	-
Methylchrysene		1JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyldibenzofuran		-	-	-	-	10JN	-	1JN	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene		-	-	-	-	-	-	1JN	-	-	-	-	-	-	-	-	-	-	-
Methylfluorene (2 isomers)		-	-	-	-	30JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene (2 isomers)		-	-	-	-	30JN	-	4JN	-	-	-	-	-	-	-	-	-	-	-
Methylphenanthrene (3 isomers)		-	-	-	30JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylpyrene		-	-	-	-	6JN	-	-	-	-	-	-	0.100JN	-	-	-	-	-	-
Naphthalene	620	ND	ND	ND	3.2J	13J	ND	3.6J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenylamine/Diphenylamine		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Octahydrodimethyl (Methylethenyl)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.200JN	-	-	-
Azulene																			
Pentachlorobiphenyl (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.400JN
Pentachlorophenol	5.3	1.9U	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.220J	ND	ND	ND	ND	ND	ND
Perylene		-	-	-	-	-	-	-	-	-	-	0.200JN	-	-	-	-	0.100JN	-	-
Phenanthrene	460	1.2	0.200J	0.260J	94	230	7.0	22	ND	0.140J	ND	ND	0.130J	ND	ND	ND	ND	0.110J	ND
Phenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenylnaphthalene		-	-	-	10JN	20JN	-	1JN	-	-	-	-	-	-	-	-	-	-	-
Pyrene	460	1.7	0.750	0.630	91	140	ND	9.2	0.100J	0.810J	ND	0.350J	1.6	ND	ND	ND	0.190J	1.6	0.077J
Tetrachlorophenol		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetramethylphenanthrene		-	-	-	-	-	3JN	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
\- Not Analyzed
*RG Shaded Cells Exceed Preliminary Sediment Remediation Goal

TABLE 7-2

TABLE 7-2. SEDIMENT SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	*RG	RB-5	*BK-S1	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-10A	SS-11	SS-12	SS-12 DUP	SS-13	*SS14	SS15	SS16	SS16-DUP	SS17
Purgeable Organics		1/7/85	1/7/85	12/9/92	12/9/92	12/9/92	12/9/92	12/9/92	12/9/92	12/9/92	12/14/92	12/14/92	12/14/92	1/19/93	12/14/92	2/15/96	2/15/96	2/15/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromomethane		-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (Total)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	9.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.065	ND	ND	ND
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloroethane		-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Bromodichloromethane		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Camphene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	-	-	-	-	-	-	-
Chloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane		-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichloromethane	0.088	-	-	0.024	0.0064	0.015	0.017	0.012	0.014	0.059	0.007	0.020	0.008	-	0.0068	ND	ND	ND	ND	ND	ND	ND	ND
Dihydromethylindene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Benzene	1,560	ND	ND	ND	ND	ND	ND	ND	ND	0.15	ND	ND	ND	ND	ND	ND	ND	ND	0.54	ND	ND	ND	ND
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorotrichloromethane		-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Indane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-Xylene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M/P-Xylene	32,000	-	-	0.0025	ND	ND	0.001	0.0011	0.0014	0.084	ND	0.0071	ND	ND	ND	ND	ND	ND	0.30	ND	ND	ND	ND
Methyl Butyl Ketone		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	9,400	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Isobutyl Ketone		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran (3 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylindan		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl-T-Butyl Ether (MTBE)		-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
O-Xylene	32,000	-	-	0.0011	ND	ND	ND	ND	ND	0.069	ND	0.0075	ND	ND	ND	ND	ND	ND	0.22	ND	ND	ND	ND
O&P-Xylene (mixed)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetramethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	3,200	ND	ND	0.0024	ND	ND	ND	0.0013	0.0034	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Xylenes	32,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Trimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Acetate		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

* Background Location

J Estimated Value

N Presumptive Evidence of Presence of Material.

ND Not Detected

\- Not Analyzed

*RG Shaded Cells Exceed Preliminary Sediment Remediation Goal

TABLE 7-2. SEDIMENT SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	"RG	SS18	SS19	SS20	SS21	SS22	SS23	SS24	*SD-01	SD-03	SD-05	SD-06	SD-07	SD-08	SD-09	SD-10	SD-11	SD-12	SD-13	SD-14	SD-15	SD-16	SD-17	SD-18	SD-19	SD-20
Purgeable Organics		2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	2/16/96	11/10/96	11/10/96	11/8/96	11/9/96	11/9/96	11/9/96	11/9/96	11/10/96	11/10/96	11/10/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromomethane		ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (Total)		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	9.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether		ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloroethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Camphene		-	-	-	-	-	-	-	-	-	-	0.040JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon Disulfide		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane		ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-1,3-Dichloropropene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane		ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	0.088	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dihydromethylindene		-	-	-	-	-	-	-	-	-	-	-	0.100JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Benzene	1,560	ND	ND	ND	ND	ND	ND	ND	0.003J	ND	ND	0.064	0.020J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyldimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	0.060JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	-	-	0.010JN	-	-	-	-	-	-	-	-	-	-	-
Ethyldimethylbenzene (3 isomers)		-	-	-	-	-	-	-	-	-	-	0.200JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylmethylbenzene		-	-	-	-	-	-	-	-	-	-	0.070JN	-	-	0.009JN	-	-	-	-	-	-	-	-	-	-	-
Fluorotrichloromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indane		-	-	-	-	-	-	-	-	-	-	2JN	0.900JN	-	0.050JN	-	-	-	-	-	-	-	-	-	-	-
Indene		-	-	-	-	-	-	-	-	-	-	0.030JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M-Xylene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M/P-Xylene	32,000	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl Butyl Ketone		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	9,400	-	-	-	-	-	-	-	ND	ND	ND	0.100	0.320	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylbenzofuran (2 isomers)		-	-	-	-	-	-	-	-	-	-	-	0.400JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylbenzofuran (3 isomers)		-	-	-	-	-	-	-	-	-	-	0.900JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylene Chloride		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylindan		-	-	-	-	-	-	-	-	-	-	0.400JN	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl-T-Butyl Ether (MTBE)		ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O-Xylene	32,000	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
O&P-Xylene (mixed)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetramethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	0.008JN	-	-	-	-	-	-	-	-	-	-	-
Toluene	3,200	ND	ND	ND	ND	ND	ND	ND	0.160	ND	ND	0.020J	ND	ND	ND	ND	ND	0.002J	ND	ND	ND	ND	0.002J	ND	ND	ND
Total Xylenes	32,000	-	-	-	-	-	-	-	ND	ND	ND	0.094	0.037J	ND	0.002J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethylene		ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-1,3-Dichloropropene		-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane		ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	0.010JN	-	-	-	-	-	-	-	-	-	-	-
Trimethylbenzene (2 isomers)		-	-	-	-	-	-	-	-	-	-	0.400JN	0.200JN	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Acetate		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes: Notes:

* Bac* Background Location

J Est J Estimated Value

N Pre-N Presumptive Evidence of Presence of Material.

ND Not Detected

\- Not Analyzed

"RG Shaded Cells Exceed Preliminary Sediment Remediation Goal

TABLE 7-3

TABLE 7-3. SEDIMENT SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg) Inorganics	**RG	RB-5 1/7/85	*BK-S1 1/7/85	SS-1 12/9/92	SS-1 2/15/96	SS-2 12/9/92	SS-3 12/9/92	SS-4 12/9/92	SS-5 12/9/92	SS-6 12/9/92	SS-7 12/9/92	SS-7 2/15/96	SS-8 12/14/92	SS-8 2/15/96	SS-9 12/14/92	SS-9 2/15/96	SS-10 1/19/93	SS-10A 12/14/92	SS-11 2/15/96	SS-11 2/15/96	SS-12 12/14/92	SS-12 DUP 2/15/96	SS-13 2/15/96	*SS14 2/16/96	SS15 2/16/96	SS16 2/16/96	SS16-DUP 2/16/96	SS17 2/16/96
Acid Volatile Sulfide		-	-	-	ND	-	-	-	-	-	-	ND	-	370	-	ND	-	-	-	ND	-	-	-	ND	-	-	-	-
Aluminum	460	750	1,700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	4.6	ND	ND	3.5	-	5.2	ND	3.6	1.5	ND	2.3	-	ND	-	ND	-	ND	13	ND	-	4.4	4.9	ND	4.9	6.0	10	12	11
Barium	460	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7.8	ND	ND	-	0.97	-	-	-	-	-	-	0.18	-	0.31	-	ND	-	-	-	ND	-	-	-	0.96	-	-	-	-
Calcium		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	78	ND	ND	5.5	-	14	2.1	11	5.2	3.1	9.2	-	4.2	-	4.1	-	2.6	38	1.3	-	2.4	2.4	ND	6.8	19	49	47	65
Cobalt	460	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper (Extractable Metal)		-	-	-	21	-	-	-	-	-	-	3.0	-	10	-	0.58	-	-	-	1.7	-	-	-	ND	-	-	-	-
Copper	620	ND	ND	6.1	-	46	8.0	14	2.4	2.8	5.1	-	1.9	-	4.4	-	3.9	34	1.0	-	11	13	16	74	15	32	31	48
Cyanide	320	0.22	0.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	460	1,400	930	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	400	15	6	14	220	290	61	25	3.4	3.1	6.3	22	2.3	54	6.9	5.0	6.2	-	1.9	5.6	-	-	-	160	-	-	-	-
Magnesium		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	460	20	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	320	ND	ND	-	2.8	-	-	-	-	-	-	ND	-	1.5	-	ND	-	-	-	ND	-	-	-	6.0	-	-	-	-
Potassium	NRG	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	78	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	460	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	4600	ND	ND	-	160	-	-	-	-	-	-	36	-	89	-	6.7	-	-	-	8.9	-	-	-	610	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N *Presumptive Evidence of Presence of Material.*
- ND Not Detected
- - Not Analyzed
- **RG Shaded Cells Exceed Preliminary Sediment Remediation Goal
- NRG No Remediation Goal has been Determined

TABLE 7-3. SEDIMENT SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg) Inorganics	**RG	SS18 2/16/96	SS19 2/16/96	SS20 2/16/96	SS21 2/16/96	SS22 2/16/96	SS23 2/16/96	SS24 2/16/96	*SD-01 11/10/96	SD-03 11/10/96	SD-05 11/8/96	SD-06 11/9/96	SD-07 11/9/96	SD-08 11/9/96	SD-09 11/9/96	SD-10 11/10/96	SD-11 11/10/96	SD-12 11/10/96	SD-13 11/8/96	SD-14 11/8/96	SD-15 11/8/96	SD-16 11/8/96	SD-17 11/8/96	SD-18 11/8/96	SD-19 11/8/96	SD-20 11/8/96
Acid Volatile Sulfide		53	-	ND	-	-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum	460	-	-	-	-	-	-	-	2,700	15,000	3,100	13,000	28,000	11,000	650	790	26,000	1,900	1,100	3,300	1,200	1,200	1,900	890	7,200	1,600
Antimony		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	4.6	8.6	10	9.7	9.8	6.3	5.0	7.6	3.8J	33J	6.2J	30J	29J	20J	ND	2.6J	17J	ND	2.6J	3.5J	2.9J	ND	2.6J	7.1J	ND	ND
Barium	460	-	-	-	-	-	-	-	46	84	60	83	110	53	4.4	2.8	54	5.8	ND	16	6	3.7	6.6	2.9	16	5.1
Beryllium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	7.8	0.29	-	0.54	-	-	-	-	0.58J	2.1J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium		-	-	-	-	-	-	-	15,000	5,400	2,000	7,800	12,000	6,700	440	360	3,300	480	330	890	460	340	830	340	920	550
Chromium	78	30	57	37	52	25	19	26	14	45	4.9	54	53	52	3.5	2.4J	44	6.1	2.8	6.4	71	9.1	20	6	16	5.2
Cobalt	460	-	-	-	-	-	-	-	1.4J	7.5J	1J	6.6J	15J	ND	0.47J	0.30J	12J	1.2J	ND	0.84J	1.4J	1.1J	1.1J	0.37J	1.7J	0.66J
Copper (Extractable Metal)		7	-	7.9	-	-	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	620	17	40	23	42	19	15	12	29	100	1100	64	94	74	2.6J	3.1J	24	4.3J	3.8J	8J	2.9J	3J	4.8J	2.5J	13	2.8J
Cyanide	320	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	460	-	-	-	-	-	-	-	5,900	25,000	7,000	39,000	59,000	20,000	880	710	27,000	2,000	780	2,800	1,600	1,300	1,300	1,600	5,400	2,000
Lead	400	24	-	23	-	-	16	-	130	590	69	100	210	120	3.8	13	28	3.9	3.5	11	4.3	2.1	9.3	3.2	28	6.7
Magnesium		-	-	-	-	-	-	-	950	3,200	220	1,800	3,800	1,800	ND	ND	4,900	400	ND	320	270	250	550	210	990	400
Manganese	460	-	-	-	-	-	-	-	43	110	29	110	160	68	7.2	6.7	210	14	3.5	14	12	11	15	7.5	23	8
Mercury		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	320	2.4	-	2.6	-	-	ND	-	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	52	35	18	ND	ND	ND
Potassium	NRG	-	-	-	-	-	-	-	210	950	ND	800	1,200	840	ND	ND	1,900	260	ND	ND	160	170	310	170	470	270
Selenium	78	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	1.2J
Silver		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	-	-	-	-	-	-	-	ND	1,600	290	ND	1,400	1,100	ND	210	3,300	560	ND	ND	ND	270	740	ND	ND	ND
Strontium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	460	-	-	-	-	-	-	-	13J	63J	5J	49J	85J	50J	10J	2.1J	56	5J	2.4J	8J	3.6J	3.3J	8.7J	4.3J	21	6.7J
Zinc	4600	100	-	81	-	-	54	-	210	530	82	440	640	340	19	23	120	17	7.8	54	12	11	18	7.8	38	14

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- \- Not Analyzed
- **RG Shaded Cells Exceed Preliminary Sediment Remediation Goal
- NRG No Remediation Goal has been Determined

TABLE 7-4

TABLE 7-4. SEDIMENT SAMPLES - PESTICIDES, PCB'S AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg)		RB-5	*BK-S1	SS-1	SS-7	SS-8	SS-9	SS-11	*SS-14	SS-18	SS-20	SS-23	*SD-01	SD-01	SD-05	SD-06	SD-07	SD-08	SD-09	SD-10	SD-11	SD-12	SD-13	SD-14	SD-15	SD-16	SD-17	SD-18	SD-19	SD-20
Pesticides/PCB Compounds	**RG	1/7/85	1/7/85	2/15/96	2/15/96	2/15/96	2/15/96	2/15/96	2/16/96	2/16/96	2/16/96	2/16/96	11/10/96	11/10/96	11/8/96	11/9/96	11/9/96	11/9/96	11/9/96	11/10/96	11/10/96	11/10/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96	11/8/96
1-Hydroxychlordene /2		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,3,7,8 TCDD (Dioxin)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4,4' -DDD (P,P' -DDD)	2.7	ND	0.0059	-	-	-	-	-	-	-	-	-	ND	ND	0.0071JN	ND	ND	ND	ND	ND	ND	ND	ND	0.0078	ND	ND	ND	ND	ND	ND
4,4' -DDE (P,P' -DDE)	1.9	ND	0.0074	-	-	-	-	-	-	-	-	-	0.017	0.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,4' -DDT (P,P' -DDT)	1.9	ND	ND	-	-	-	-	-	-	-	-	-	0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin	0.038	ND	ND	-	-	-	-	-	-	-	-	-	0.0012J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha-BHC		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordane /2		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alpha-Chlordene /2		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beta-BHC		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane (Tech. Mixture) /1		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlordene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cis-Nonachlor /2		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Delta-BHC	0.35	ND	ND	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	0.00042J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	0.04	ND	ND	-	-	-	-	-	-	-	-	-	0.012	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0014JN	ND	ND	ND	ND	ND
Endosulfan I (Alpha)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endosulfan II (Beta)	94	ND	ND	-	-	-	-	-	-	-	-	-	ND	0.0029J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	94	ND	ND	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	0.016JN	ND	ND	ND	ND	ND	ND	ND	0.0026J	ND	ND	ND	ND	ND
Endrin		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Endrin Aldehyde	4.6	ND	ND	-	-	-	-	-	-	-	-	-	ND	0.023	ND	ND	ND	ND	ND	0.0012J	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00078J
Endrin Ketone		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma-BHC (Lindane)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gamma Chlordane /2	1.8	ND	ND	-	-	-	-	-	-	-	-	-	ND	0.027	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00043JN
Gamma-Chlordene /2		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methoxychlor	78	ND	ND	-	-	-	-	-	-	-	-	-	ND	ND	ND	0.100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.049	ND
PCB-1016 (Aroclor 1016)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1221 (Aroclor 1221)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1232 (Aroclor 1232)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1242 (Aroclor 1242)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1248 (Aroclor 1248)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1254 (Aroclor 1254)		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PCB-1260 (Arochlor 1260)	1	ND	ND	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	0.590N	0.170N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toxaphene		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-Nonachlor /2		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																														
Total Organic Carbon		-	-	99,000	25,000	41,000	3,000	4,600	9,200	49,000	73,000	27,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
- * Background Location
- J Estimated Value
- N Presumptive Evidence of Presence of Material.
- ND Not Detected
- - Not Analyzed
- **RG Shaded Cells Exceed Preliminary Sediment Remediation Goal

TABLE 8-1

TABLE 8-1. SURFACE WATER SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	RB-W	*BK-W1	*SW-1	*SW-2	SW-3	SW-4	SW-4 DUP	SW-5	*SW-01	SW-03	SW-04	SW-05	SW-06	SW-07	SW-08	SW-09
Extractable Organics	1/7/85	1/7/85	2/15/96	2/15/96	2/15/96	2/15/96	2/15/96	2/15/96	11/10/96	11/9/96	11/9/96	11/9/96	11/9/96	11/10/96	11/10/96	11/10/96
1,2,4-Trichlorobenzene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methyl-4,6-Dinitrophenol	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylphenol	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
3,3-Dichlorobenzidine	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
3-and/or 4-Methylphenol	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
4-Bromophenyl Phenyl Ether	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloroaniline	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl Phenyl Ether	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzidine	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(ghi) Perylene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b and/or k)Fluoranthene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b and/or k)Fluoranthene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoic Acid	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzothiophene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Alcohol	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzyl Butyl Phthalate	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroethoxy)Methane	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethyl)Ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroisopropyl)Ether	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl) Phthalate	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
C3-Alkylbenzene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
C5 Alkyl-Benzene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl Phthalate	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Dimethyl Phthalate	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Butylphthalate	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Di-N-Octylphthalate	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene (HCB)	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene(HCCP)	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methylheptanol	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrocarbazole	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-N-Propylamine	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodiphenlyamine/Diphenylamin	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Prometon	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Protect	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorophenols	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Tetrahydrodimethylpyranone	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tribromophenol	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
- Not Analyzed
Shaded Cells Exceed Surface Water Remediation Goal

TABLE 8-2

TABLE 8-2. SURFACE WATER SAMPLES - VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	RB-W	*BK-W1	*SW-1	*SW-2	SW-3	SW-4	SW-4 DUP	SW-5	*SW-01	SW-03	SW-04	SW-05	SW-06	SW-07	SW-08	SW-09
Purgeable Organics	1/7/85	1/7/85	2/15/96	2/15/96	2/15/96	2/15/96	2/15/96	2/15/96	11/10/96	11/9/96	11/9/96	11/9/96	11/9/96	11/10/96	11/10/96	11/10/96
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethene (total)	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2,2-Chloroisopropylether	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl Ether	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl Ether	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-Chloroethoxy) Methane	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Ethyl Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
M&P-Xylene	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Methyl Butyl Ketone	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Ethyl Ketone	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Isobutyl Ketone	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Methyl Tert-Butyl Ether (MTBE)	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Methylene Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
M-Xylene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
O&P-Xylene (mixed)	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Styrene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	0.001J	ND	ND	ND	ND	ND	ND	ND
Total xylenes	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethene	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans-1,2-Dichloroethylene	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Trans-1,3-Dichloropropene	ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	-	-	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-
Vinyl Acetate	ND	ND	-		-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
- Not Analyzed
Shaded Cells Exceed Surface Water Remediation Goal

TABLE 8-3

TABLE 8-3. SURFACE WATER SAMPLES - INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L) Inorganics	"RG	RB-W 1/7/85	*BK-W1 1/7/85	*SW-1 2/15/96	*SW-2 2/15/96	SW-3 2/15/96	SW-4 2/15/96	SW-4 Dup 2/15/96	SW-5 2/15/96	*SW-01 11/10/96	*SW-01-Dup 11/10/96	SW-03 11/9/96	SW-04 11/9/96	SW-05 11/9/96	SW-06 11/9/96	SW-07 11/10/96	SW-08 11/10/96	SW-09 11/10/96
Aluminum	NRG	1.0	0.5	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	0.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.009J	ND	ND	ND	ND	ND
Barium	NRG	ND	ND	-	-	-	-	-	-	0.065	0.072	0.030	0.033	0.034	0.036	0.027	0.028	0.027
Beryllium		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron		-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium		ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium	NRG	41	23	-	-	-	-	-	-	65	70	32	35	35	38	30	28	37
Chromium	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003J	ND	ND	ND	ND	ND	ND	ND
Cobalt		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	0.003	ND	ND	ND	ND	ND	ND	ND	ND	0.020J	0.020J	0.017J	0.015J	0.023J	0.015J	0.022J	0.015J	0.015J
Cyanide	0.001	ND	0.04	-	-	-	-	-	-	ND	0.017	ND	ND	ND	ND	ND	ND	ND
Iron	1	2.4	0.68	-	-	-	-	-	-	5.1	4.7	0.440	0.650	0.450	1.400	0.940	1.300	0.830
Lead	0.025	ND	ND	-	-	-	-	-	-	0.006	0.009	ND	ND	0.004	0.003	ND	ND	ND
Magnesium	NRG	100	ND	-	-	-	-	-	-	6.0	6.4	2.4	2.8	2.6	3.9	68	64	96
Manganese	NRG	0.13	0.02	-	-	-	-	-	-	0.51	560	0.022	0.029	0.027	0.068	0.066	0.073	0.073
Mercury		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum		-	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel		ND	ND	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	NRG	36	ND	-	-	-	-	-	-	3.1	3.6	2.2	2.4	2.4	2.9	43	39	57
Selenium		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	NRG	930	10	-	-	-	-	-	-	16	19	8.1	9.4	8.9	17	550	520	690
Thallium		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin		ND	ND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	NRG	ND	ND	-	-	-	-	-	-	0.001J	ND	ND	ND	0.002J	0.002J	0.002J	0.003J	ND
Zinc	0.086	ND	ND	-	-	-	-	-	-	0.042	0.034	0.028	0.028	0.033	0.026	0.033	0.039	0.037

Notes:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
- Not Analyzed
"RG Shaded Cells Exceed Surface Water Remediation Goal
NRG No Remediation Goal has been Determined

TABLE 8-4

TABLE 8-4. SURFACE WATER SAMPLES - PESTICIDES AND PCBs
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L) Pesticides/PCB Compounds	** RG	RB-W 1/7/85	*BK-W1 1/7/85	*SW-01 11/10/96	*SW-01-Dup 11/10/96	SW-03 11/9/96	SW-04 11/9/96	SW-05 11/9/96	SW-06 11/9/96	SW-07 11/10/96	SW-08 11/10/96	SW-09 11/10/96
Aldrin		ND	ND	-	-	-	-	-	-	-	-	-
Heptachlor		ND	ND	-	-	-	-	-	-	-	-	-
Heptachlor Epoxide		ND	ND	-	-	-	-	-	-	-	-	-
Alpha-BHC		ND	ND	-	-	-	-	-	-	-	-	-
Beta-BHC		ND	ND	-	-	-	-	-	-	-	-	-
Gamma-BHC (Lindane)		ND	ND	-	-	-	-	-	-	-	-	-
Delta-BHC		ND	ND	-	-	-	-	-	-	-	-	-
Endosulfan I (Alpha)		ND	ND	-	-	-	-	-	-	-	-	-
Dieldrin		ND	ND	-	-	-	-	-	-	-	-	-
4,4'-DDT (P,P'-DDT)		ND	ND	-	-	-	-	-	-	-	-	-
4,4'-DDE (P,P'-DDE)		ND	ND	-	-	-	-	-	-	-	-	-
4,4'-DDD (P,P'-DDD)		ND	ND	-	-	-	-	-	-	-	-	-
Endrin		ND	ND	-	-	-	-	-	-	-	-	-
Endosulfan II (Beta)		ND	ND	-	-	-	-	-	-	-	-	-
Endosulfan Sulfate		ND	ND	-	-	-	-	-	-	-	-	-
Chlordane (Tech. Mixture) /1		ND	ND	-	-	-	-	-	-	-	-	-
PCB-1242 (Aroclor 1242)		ND	ND	-	-	-	-	-	-	-	-	-
PCB-1254 (Aroclor 1254)		ND	ND	-	-	-	-	-	-	-	-	-
PCB-1221 (Aroclor 1221)		ND	ND	-	-	-	-	-	-	-	-	-
PCB-1232 (Aroclor 1232)		ND	ND	-	-	-	-	-	-	-	-	-
PCB-1248 (Aroclor 1248)		ND	ND	-	-	-	-	-	-	-	-	-
PCB-1260 (Aroclor 1260)	0.001	ND	ND	0.0010J	0.0010J	ND	0.00033J	0.0019	0.0094	0.00055J	0.00015J	ND
PCB-1016 (Aroclor 1016)		ND	ND	-	-	-	-	-	-	-	-	-
Toxaphene		ND	ND	-	-	-	-	-	-	-	-	-
Endrin Aldehyde		ND	ND	-	-	-	-	-	-	-	-	-
2,3,7,8 TCDD (Dioxin)		-	-	-	-	-	-	-	-	-	-	-
Chlordene				-	-	-	-	-	-	-	-	-
Alpha-Chlordene /2				-	-	-	-	-	-	-	-	-
Gamma-Chlordene /2				-	-	-	-	-	-	-	-	-
1-Hydroxychlordene /2				-	-	-	-	-	-	-	-	-
Gamma-Chlordane /2				-	-	-	-	-	-	-	-	-
Trans-Nonachlor /2				-	-	-	-	-	-	-	-	-
Alpha-Chlordane /2	0.00005			0.000050J	0.000050J	ND	ND	ND	0.000064	ND	ND	ND
Cis-Nonachlor /2				-	-	-	-	-	-	-	-	-
Methoxychlor		ND	ND	-	-	-	-	-	-	-	-	-
Endrin Ketone		ND	ND	-	-	-	-	-	-	-	-	-

Notes:
* Background Location
J Estimated Value
N Presumptive Evidence of Presence of Material.
ND Not Detected
- Not Analyzed
** RG Shaded Cells Exceed Surface Water Remediation Goal

TABLE 9-1

TABLE 9-1. CAPE FEAR RIVER SURFACE WATER SAMPLES SEMI-VOLATILES AND INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY
WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	RR Bridge[1]	City POTW[2]	State Port[3]																				
Extractable Organics	6/1/83	6/1/83	6/1/83	1/13/87	1/12/88	6/7/88	1/10/89	6/6/89	1/30/90	7/31/90	12/17/91	6/23/92	1/13/93	7/9/93	1/18/94	7/12/94	1/9/95	7/11/95	1/15/96	7/2/96	1/6/97	7/11/97	1/16/98
2,4-Dimethylphenol	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Anthracene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b,k)Fluoranthene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.003	ND	0.003	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorophenols	0.003	ND	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorophenols	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics																							
Arsenic	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
- Not Analyzed
[1] Railroad Bridge Upstream of Site North of Wilmington
[2] City of Wilmington POTW Downstream of Site
[3] State Ports Authority Downstream of Site
[4] Mouth of Greenfield Creek
[5] Former Slip Adjacent to Southern Wood Piedmont Site
[6] Highway 74 Bridge Upstream of Site

TABLE 9-1. CAPE FEAR RIVER SURFACE WATER SAMPLES SEMI-VOLATILES AND INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY
WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	Greenfield Creek[4]																					
Extractable Organics	6/1/83	1/13/87	1/12/88	6/7/88	1/10/89	6/6/89	7/24/89	1/31/90	7/31/90	12/17/91	6/23/92	1/13/93	7/9/93	1/18/94	7/12/94	1/9/95	7/11/95	1/15/96	7/2/96	1/6/97	7/11/97	1/16/98
2,4-Dimethylphenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b,k)Fluoranthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	0.050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorophenols	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorophenols	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics																						
Arsenic	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	-	ND	ND	ND	ND	ND	ND	ND	0.046	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	-	ND	ND	ND	ND	ND	ND	ND	0.052	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
- Not Analyzed
[1] Railroad Bridge Upstream of Site North of Wilmington
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[3] State Ports Authority Downstream of Site
[4] Mouth of Greenfield Creek
[5] Former Slip Adjacent to Southern Wood Piedmont Site
[6] Highway 74 Bridge Upstream of Site

TABLE 9-1. CAPE FEAR RIVER SURFACE WATER SAMPLES SEMI-VOLATILES AND INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY
WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	SWP Old Slip[5]																				
Extractable Organics	6/1/83	1/13/87	1/12/88	6/7/88	1/10/89	6/6/89	1/30/90	7/31/90	12/17/91	6/23/92	1/13/93	7/9/93	1/18/94	7/12/94	1/9/95	7/11/95	1/15/96	7/2/96	1/6/97	7/11/97	1/16/98
2,4-Dimethylphenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b,k)Fluoranthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorophenols	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorophenols	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics																					
Arsenic	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	-	ND	ND	ND	ND	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	-	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
- Not Analyzed
[1] Railroad Bridge Upstream of Site North of Wilmington
[2] City of Wilmington POTW Downstream of Site
[3] State Ports Authority Downstream of Site
[4] Mouth of Greenfield Creek
[5] Former Slip Adjacent to Southern Wood Piedmont Site
[6] Highway 74 Bridge Upstream of Site

TABLE 9-1. CAPE FEAR RIVER SURFACE WATER SAMPLES SEMI-VOLATILES AND INORGANICS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY
WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L)	US 74 New Bridge[6]																				
Extractable Organics	6/1/83	1/13/87	1/12/88	6/7/88	1/10/89	6/6/89	1/30/90	7/31/90	12/17/91	6/23/92	1/13/93	7/9/93	1/18/94	7/12/94	1/9/95	7/11/95	1/15/96	7/2/96	1/6/97	7/11/97	1/16/98
2,4-Dimethylphenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b,k)Fluoranthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)Anthracene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	0.001	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachlorophenols	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorophenols	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Inorganics																					
Arsenic	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
- Not Analyzed
[1] Railroad Bridge Upstream of Site North of Wilmington
[2] City of Wilmington POTW Downstream of Site
[3] State Ports Authority Downstream of Site
[4] Mouth of Greenfield Creek
[5] *Former Slip Adjacent to Southern Wood Piedmont Site*
[6] Highway 74 Bridge Upstream of Site

TABLE 10-1

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	Composite 1 9/5/84	Composite 2 9/5/84	Composite 3 9/5/84	Composite 4 9/5/84	Composite 5 9/5/84	Composite 6 9/5/84	Composite 7 9/5/84	Composite 8 9/5/84	Composite 9 9/5/84	Composite 10 9/5/84	Composite 11 9/5/84	Composite 12 9/5/84	Composite 7A 9/19/87	Composite 7B 9/19/87	Composite 7A 11/8/87	Composite 7B 11/8/87	Composite 7A 1/25/88	Composite 7B 1/25/88	Composite 7A 3/8/88	Composite 7B 3/8/88	Composite 7A 4/15/88	Composite 7B 4/15/88	Composite 7A 5/9/88
Extractable Organics																							
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	-	-	-	-	-	-	-	-	-	-	-	-	138	146	ND	43.4	283	291	527	692	373	498	184
1-Methylnaphthalene	*	ND	ND	27.6	*	ND	*	ND	ND	8.59	ND	ND	189	223	61.1	74	433	467	643	812	701	1486	287
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	7.56	ND	ND	18.9	*	ND	*	ND	ND	21.8	ND	ND	347	416	109.2	155.9	1088	1187	1566	2259	1553	3569	556
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	29.2	*	ND	479	7.53	ND	11.6	*	ND	196	6.54	*	901	996	183.2	248.3	1143	1261	1901	2511	1955	3548	996
Acenaphthylene	22.8	ND	ND	61.5	*	ND	50.2	ND	ND	56	40.5	*	13	14	ND	ND	22	26	44	58	90	158	23
Anthracene	94.5	8.54	ND	540	31.7	*	33.2	11.7	*	879	50.1	39.1	1313	1279	105.2	863.4	2062	2303	3892	11483	4215	4297	1677
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	29	35	23.4	27.3	81	88	154	199	80	105	48
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	38	51	ND	ND	13
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	14.3	ND	ND	*	ND	ND	*	ND	ND	56	64	16	24.4	256	281	407	616	350	819	15
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	14.7	ND	ND	59.9	4.33	ND	ND	ND	ND	263	*	*	243	212	ND	339.8	871	963	1570	1326	687	1906	468
Chrysene	163	*	ND	391	40.5	*	55.3	9.39	*	248	21.5	33.7	154	161	20.3	102	328	342	544	749	509	457	155
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	8.36	ND	ND	236	*	ND	*	ND	ND	89.1	7.84	*	839	917	124.6	259.2	1095	1198	1981	3319	1762	3534	853
Fluoranthene	451	19.9	ND	1490	116	8.76	149	22.8	9.43	1290	80.5	82.9	1640	1557	180.3	295.7	1641	1723	3067	4028	3695	4579	1590
Fluorene	29.5	*	ND	437	12.7	ND	7.27	ND	ND	323	*	8.48	1310	1406	172.2	488.9	1716	1862	2946	6048	2351	4393	1447
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	7.21	ND	ND	12.9	*	ND	ND	ND	ND	20.8	ND	ND	66	94	188.6	162.2	1889	1928	1786	2062	2579	6678	147
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	286	5.77	*	44.3	4.48	0.282	58.5	4.15	1.32	161	10.9	9.08	13.1	10.9	ND	ND	27.1	30.8	48.1	68.8	ND	ND	21.4
Phenanthrene	81.2	*	ND	996	33.8	10.8	25.5	11	*	816	26.5	21.8	3595	3787	365.9	810.9	4201	4430	7400	13996	6314	10794	3662
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	361	14.1	ND	1120	85.2	*	116	15.8	7.47	883	53.7	38.4	1084	1003	145.7	239.4	1251	1264	2285	2963	2708	3251	1163
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																							
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																							
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	Composite 7B 5/9/88	Composite 7A 6/17/88	Composite 7B 6/17/88	Composite 7A 8/18/88	Composite 7B 8/18/88	Composite 7A 9/30/88	Composite 7B 9/30/88	Composite 7A 11/28/88	Composite 7B 11/28/88	Composite 7A 2/6/89	Composite 7B 2/6/89	Composite 7A 5/1/89	Composite 7B 5/1/89	Composite 7A 9/22/89	Composite 7B 9/22/89	Composite 7A 11/11/89	Composite 7B 11/11/89	LF#1 River I 10/2/84	LF#2 Office IV 10/2/84	LF#1 1A 3/21/85	LF#1 1A 4/25/85	LF#1 1A 7/11/85	LF#1 1A 7/15/85	LF#1 1A 8/13/85	LF#1 1A 8/23/85
Extractable Organics																									
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	233	90	79	257	287	348	386	357	317	299	237	473	489	304	337	437	366	-	-	12.6	42.8	50.51	ND	-	ND
1-Methylnaphthalene	290	5	8	425	415	1850	450	531	597	352	480	112	67	158	153	188	171	ND	8.57	ND	ND	ND	ND	-	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	558	14	12	1036	990	4471	1159	1234	1555	819	1261	343	103	296	285	286	297	ND	14.8	ND	*	ND	ND	-	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1024	80	89	1292	1298	5782	2004	1737	1965	1134	1512	1158	515	772	724	987	913	*	307	*	*	ND	ND	-	4.202
Acenaphthylene	24	ND	ND	26	26	71	30	28	37	20	27	22	10	19	20	22	21	ND	*	ND	ND	ND	ND	-	ND
Anthracene	1729	534	97	3564	2973	11409	10099	2682	8056	1036	3012	6472	1344	2656	3044	2021	3555	19.7	714	9.28	31.6	7.797	ND	-	8.596
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	59	31	25	74	83	120	206	78	65	77	82	176	153	82	89	100	83	-	-	ND	ND	ND	ND	-	ND
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	15	ND	ND	ND	ND	47	66	18	ND	17	18	54	43	24	24	ND	ND	-	-	ND	ND	ND	ND	-	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	19	4	3	216	207	1083	240	55	114	152	249	77	22	54	49	42	42	ND	15.4	ND	*	ND	ND	-	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	488	123	22	1375	1176	3762	4394	1062	1509	391	1643	2952	441	825	874	559	1059	ND	212	ND	ND	ND	ND	-	ND
Chrysene	195	127	103	267	296	308	368	308	299	249	245	626	638	276	318	384	321	37.3	168	36.6	58.2	33.86	ND	-	ND
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	877	54	36	1232	1201	5011	1773	1694	2217	956	1504	968	341	727	668	765	739	*	131	ND	*	ND	ND	-	ND
Fluoranthene	1583	456	410	1697	1878	3084	2081	2413	2274	1570	1517	2838	1960	1570	1738	2312	2206	180	1410	54	167	63.13	ND	-	15.2
Fluorene	1485	129	86	1844	1779	9251	3261	2472	3612	1370	2432	2127	613	1315	1172	1390	1492	*	340	*	*	ND	ND	-	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	142	8	5	1715	1630	9251	1665	767	942	1403	1906	170	79	185	226	188	184	ND	11.1	ND	ND	ND	ND	-	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	21.8	ND	ND	12.6	14.3	142	18.1	53.9	65.3	34.3	42.3	21.9	16.6	ND	ND	2.98	4.39	9.79	943	*	37.2	10.212	ND	1.322	10.85
Phenanthrene	3745	387	256	4620	4541	13876	8171	6580	7692	3266	5423	4123	1532	2576	1696	3437	3758	69	829	11.8	30.7	11.13	ND	-	2.351
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	1303	286	254	954	1066	1912	1356	1892	1402	920	849	1629	1172	857	1237	1310	1200	102	951	75.9	168	61.8	ND	-	16.3
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																									
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																									
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	LF#1 1A 11/13/85	LF#1 1A 12/16/85	LF#1 1B 3/21/85	LF#1 1B 4/25/85	LF#1 1B 7/11/85	LF#1 1B 7/15/85	LF#1 1B 8/23/85	LF#1 1B 11/13/85	LF#1 1B 12/16/85	LF#1 2A 7/15/85	LF#1 2A 8/13/85	LF#1 2B 7/15/85	LF#1 3A 8/13/85	LF#1 4A 1/10/85	LF#2 4A 3/21/85	LF#2 4A 4/25/85	LF#2 4A 7/11/85	LF#1 4A 8/13/85	LF#2 4A 8/23/85	LF#2 4A 11/13/85	LF#2 4A 12/16/85	LF#1 4B 1/10/85	LF#2 4B 3/21/85	LF#2 4B 4/25/85	LF#2 4B 7/11/85	LF#2 4B 8/23/85	LF#2 4B 11/13/85	LF#2 4B 12/16/85
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	ND	ND	*	31.3	51.96	ND	ND	ND	ND	ND	-	ND	-	ND	221	68	298.1	-	177.6	86.52	37.95	ND	128	110	338.7	166.2	116.8	38.73
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	ND	*	ND	1.423	-	2.41	ND	ND	ND	ND	ND	1.971	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	ND	13.1	ND	5.535	-	ND	ND	ND	ND	*	ND	6.996	ND	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	ND	*	ND	ND	ND	3.311	ND	ND	ND	-	ND	-	ND	102	27	5.679	-	159.7	ND	21.52	ND	14.7	69.5	6.637	182.7	ND	34.41
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	ND	ND	ND	3.584	-	3.826	ND	ND	ND	ND	ND	3.483	3.999	ND	ND
Anthracene	ND	ND	7.67	19.8	8.29	ND	4.954	ND	ND	ND	-	ND	-	ND	435	139	41.29	-	177.4	67.14	28.27	ND	154	215	72.95	98.42	86.48	44.26
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	ND	42.05	ND	ND	ND	ND	ND	ND	35.07	ND	-	ND	-	ND	112	ND	ND	-	56.94	50.59	18.64	ND	63.3	ND	ND	57.06	60.52	29.25
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	ND	23.1	ND	ND	ND	ND	ND	ND	160.3	ND	-	ND	-	ND	27.4	ND	ND	-	ND	ND	100.7	ND	30.5	ND	ND	ND	ND	94.6
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	ND	*	ND	1.497	-	ND	ND	ND	ND	ND	ND	1.646	ND	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	ND	102	ND	9.504	-	26.45	ND	ND	ND	22.2	ND	10.86	20.1	ND	ND
Chrysene	ND	ND	21.7	39.9	37.83	ND	ND	ND	ND	ND	-	ND	-	ND	179	112	204	-	173.5	204.3	84.97	ND	133	164	229	159.1	167.8	88.52
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	ND	16.4	ND	5.116	-	20.14	ND	ND	ND	8.77	ND	6.845	28.84	ND	ND
Fluoranthene	ND	ND	36.5	104	59.92	ND	24.44	ND	207.1	ND	-	ND	-	29.4	1020	668	607.1	-	922.9	295.5	617.9	50	613	1010	705.6	833.3	384.3	637.3
Fluorene	ND	24.63	*	ND	ND	ND	ND	ND	10.43	ND	-	ND	-	ND	124	28.5	6.816	-	36.16	ND	ND	ND	19.8	60.3	9.666	38.3	ND	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	-	ND	ND	ND	6.953	-	ND	ND	ND	ND	ND	ND	10.3	ND	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	ND	40.655	*	33.3	10.83	ND	10.319	ND	37.027	ND	0.6748	ND	192.61	7.93	384	425	276.41	6.2734	461.51	326.37	350.9	7.55	301	514	293.95	456.18	327.97	363.87
Phenanthrene	ND	62.25	11.2	13.9	12.07	ND	1.645	ND	42.51	ND	-	ND	-	ND	376	58.2	39.47	-	75.76	ND	22.46	ND	75.3	203	43.62	62.97	ND	33.19
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	ND	ND	43.6	129	61.03	ND	22.74	ND	209	ND	-	ND	-	31.3	863	588	639.1	-	846.1	424.1	778.9	51.9	546	915	674.8	704	480.4	834.3
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																												
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																												
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 5A	LF#2 7A	LF#2 7A	LF#2 7B	LF#2 8A	LF#2 10A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1A	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#1 1B	LF#2 4A
Extractable Organics	8/13/85	1/10/85	8/13/85	1/10/85	8/13/85	8/13/85	1/20/86	1/25/86	1/29/86	2/18/86	3/18/86	4/15/86	5/9/86	6/20/86	8/11/86	10/6/86	12/8/86	1/20/86	1/25/86	1/29/86	2/18/86	3/18/86	4/15/86	5/9/86	6/20/86	8/11/86	10/6/86	12/8/86	1/20/86
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	-	308	-	372	-	-	ND	ND	64.74	ND	49.93	15.87	46.37	16.72	9.628	16.6	ND	ND	ND	ND	ND	96.28	14.49	63.24	19.07	11.37	19.4	15.8	59.01
1-Methylnaphthalene	-	ND	-	ND	-	-	ND	ND	ND	ND	ND	ND	ND	0.884	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.812	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	-	ND	-	ND	-	-	ND	ND	ND	ND	ND	ND	ND	6.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.3991	11.674	ND	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	-	384	-	372	-	-	ND	ND	ND	ND	ND	ND	18.7	1.996	ND	ND	ND	ND	ND	ND	ND	11.89	ND	18.27	2.462	ND	ND	ND	ND
Acenaphthylene	-	ND	-	ND	-	-	ND	ND	ND	ND	ND	ND	ND	3.416	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.532	ND	ND	ND	ND
Anthracene	-	945	-	853	-	-	66.19	335.1	1119	113.9	255.2	238	391.85	227.21	37.971	5.2	27.4	ND	857.1	91.58	195.3	79.12	154.5	230.25	353.57	767.84	8.9	21.4	229.6
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	-	ND	-	ND	-	-	ND	ND	ND	ND	40.09	ND	21.51	22.08	6.92	ND	ND	ND	ND	ND	ND	49.69	ND	26.92	23.35	12.04	ND	ND	ND
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	-	ND	-	ND	-	-	ND	ND	ND	ND	ND	ND	ND	10.4	6.86	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.9	12	ND	ND	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	-	ND	-	ND	-	-	ND	ND	ND	ND	ND	ND	ND	2.979	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.608	5.897	ND	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	-	25.4	-	15.9	-	-	ND	ND	494.2	ND	7.201	ND	160	69.23	8.064	ND	ND	ND	ND	ND	ND	9.862	ND	97.83	116.2	215.4	ND	ND	ND
Chrysene	-	369	-	481	-	-	ND	ND	63.16	ND	124.9	26.45	41.73	27.78	5.356	12.6	ND	ND	ND	ND	ND	232.4	18.51	72.42	34.46	13.6	17.1	ND	105.2
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	-	47.1	-	55.1	-	-	ND	ND	ND	ND	ND	ND	13.4	13.12	6.98	ND	ND	ND	ND	ND	ND	ND	ND	10.86	16.84	22.81	ND	ND	ND
Fluoranthene	-	2890	-	3150	-	-	ND	532.5	515.3	ND	236.3	52.53	249.7	56.37	10.35	12.7	19.6	ND	478.5	241.1	ND	474.3	108.4	273.5	59.13	14.92	15.4	14.2	580
Fluorene	-	231	-	202	-	-	28.82	ND	280.5	ND	49.13	26.5	51.62	22.63	5.476	ND	ND	ND	173	ND	ND	20.73	ND	35.13	34.81	55.78	ND	ND	25.32
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	-	ND	-	ND	-	-	ND	ND	ND	ND	ND	ND	ND	4.4341	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.0503	7.4016	ND	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	30.712	624	10.338	721	1.6596	1.974	ND	80.996	73.174	-	-	40.436	25.138	9.6995	2.9727	ND	1.5005	ND	69.802	71.732	-	-	42.674	16.09	8.7585	3.4842	ND	1.3895	307.64
Phenanthrene	-	680	-	634	-	-	54.541	123.15	630	82.037	80.406	47.556	167.55	36.166	10.049	7.5	9.9	ND	425.23	71.579	86.323	78.803	31.634	118.53	53.272	77.025	18.2	4.4	73.081
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	-	2290	-	2500	-	-	ND	395	595.3	ND	250.6	54.49	219.4	53.16	12.76	20.1	25.1	ND	368.5	313.7	ND	391.2	86.23	227.5	58.12	18.65	25.1	26.6	842.2
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																													
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																													
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	LF#2 4A 1/25/86	LF#2 4A 1/29/86	LF#2 4A 2/18/86	LF#2 4A 3/18/86	LF#2 4A 4/15/86	LF#2 4A 5/9/86	LF#2 4A 6/20/86	LF#2 4A 8/11/86	LF#2 4A 10/6/86	LF#2 4A 12/8/86	LF#2 4B 1/20/86	LF#2 4B 1/25/86	LF#2 4B 1/29/86	LF#2 4B 2/18/86	LF#2 4B 3/18/86	LF#2 4B 4/15/86	LF#2 4B 5/9/86	LF#2 4B 6/20/86	LF#2 4B 8/11/86	LF#2 4B 10/6/86	LF#2 4B 12/8/86	LF#1 1A 2/9/87	LF#1 1A 5/8/87	LF#1 1A 9/19/87	LF#1 1A 11/8/87	LF#1 1A 11/20/87	LF#1 1B 2/9/87	LF#1 1B 5/8/87	LF#1 1B 9/19/87	LF#1 1B 11/8/87
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	ND	ND	89.34	ND	41.98	77.61	39.72	20.55	24.7	70.6	262.6	ND	ND	76.93	ND	51.82	98.77	112.5	23.95	34.3	52.2	22.1	28.4	27	ND	39.6	11.4	45.6	37	ND
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	1.677	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.944	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	16.061	11.368	ND	ND	ND	ND	ND	ND	ND	ND	13.785	24.664	7.538	ND	ND	ND	22.1	ND	ND	47.1	ND	23.3	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	ND	ND	ND	ND	25.67	5.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	26.97	13.92	ND	ND	ND	ND	6.6	ND	ND	61.1	ND	7.6	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	5.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.126	ND	ND	ND	ND	ND	ND	ND	11.1	ND	ND	ND	ND
Anthracene	1361	311.5	330.1	470.3	219.7	114.51	845.65	215.64	40.8	99.5	118.9	493.5	309.4	153.2	321.7	239.8	340.82	1312.1	281.88	47.6	304.4	124.6	955.2	191	615.5	3273.2	159.3	1228.3	269	422.2
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	ND	ND	ND	ND	42.52	26.76	37.64	18.91	27.9	45	92.54	ND	ND	ND	ND	63.08	29.41	60.32	22.86	33.5	35.3	7.3	20.8	ND	52.8	35.5	ND	20.7	ND	25
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	ND	ND	ND	ND	ND	ND	15.9	12.8	18.7	30.6	ND	ND	ND	ND	ND	ND	ND	25.8	18.4	19	17.7	ND	ND	ND	ND	15.7	ND	ND	ND	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	4.556	4.462	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.849	ND	ND	ND	ND	5	ND	ND	8.1	ND	5.2	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	466.3	ND	ND	114.4	62.53	44.18	203.6	54.65	14.7	24.4	ND	170.3	ND	ND	91.68	61.45	156.8	382.5	63.22	8.2	61.8	33.5	309.9	56	212.2	732.5	41.2	402	107	117.5
Chrysene	ND	ND	129.7	33.23	95.16	93.35	145.4	21.52	29	83	478.8	ND	ND	96.79	17.98	116.4	116.7	159.9	26.69	34.5	67.7	40.9	59.2	31	79.5	79.7	12.9	78.9	47	41.9
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	ND	ND	ND	ND	12.21	29.48	15.74	8.4	ND	ND	ND	ND	ND	ND	ND	36.9	66.84	16.84	8.3	ND	ND	35.6	ND	ND	76.2	ND	40.4	ND	ND
Fluoranthene	375.1	ND	992.1	247.1	202.8	222	107.5	31.98	47.8	185.4	973.3	268.5	ND	784.8	191	233.3	289.8	425.3	49.67	50.4	71.2	123.2	83.2	36	39.8	288	92.1	154	54	33.6
Fluorene	225.9	ND	ND	61.1	24.42	32.73	55.42	31.98	6.1	20.1	34.33	96.46	ND	ND	18.82	30.23	92.8	202.5	27.17	5.6	36.4	12.2	87.2	27	47.8	236.2	20.7	106.1	39	37.4
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	ND	ND	ND	ND	14.354	8.3891	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.5	5.8967	ND	ND	ND	11.5	ND	ND	32.6	ND	12.6	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	ND	ND	-	-	161.72	91.501	41.651	28.723	21.668	42.376	365.7	ND	ND	-	-	213.6	101.47	41.501	31.678	21.715	17.968	ND	4.8	ND	ND	2.9	ND	3.7	ND	ND
Phenanthrene	686.8	83.253	94.305	129.45	54.377	77.608	89.931	52.267	19.5	33.7	228.41	319.37	239.55	86.239	63.246	67.972	234.99	414.59	50.152	18.4	56.9	39.1	126.6	44	75.5	444.5	43.3	164.5	77	52.4
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	167.6	ND	877.9	247.9	224.6	232.3	113.8	38.78	59.3	180.7	1106	171.2	ND	732.7	235.5	212.6	297.9	386.7	54.83	60.9	69.5	110.5	74	54	44	251.9	85.1	129.5	71	34.2
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																														
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																														
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 1B 11/20/87	LF#2 4A 2/9/87	LF#2 4A 5/8/87	LF#2 4A 9/19/87	LF#2 4A 11/8/87	LF#2 4A 11/20/87	LF#2 4B 2/9/87	LF#2 4B 5/8/87	LF#2 4B 9/19/87	LF#2 4B 11/8/87	LF#2 4B 11/20/87	LF#1 1A 1/25/88	LF#1 1A 3/8/88	LF#1 1A 4/15/88	LF#1 1A 5/9/88	LF#1 1A 6/17/88	LF#1 1A 6/24/88	LF#1 1A 8/18/88	LF#1 1A 9/30/88	LF#1 1A 10/10/88	LF#1 1A 11/28/88	LF#1 1A 12/13/88	LF#1 1B 1/25/88	LF#1 1B 3/8/88	LF#1 1B 4/15/88	LF#1 1B 5/9/88	LF#1 1B 6/17/88	LF#1 1B 6/24/88	LF#1 1B 8/18/88
Extractable Organics																													
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	54.7	23.1	59.9	37	38.1	71	25.9	64.7	29	35.9	84.3	52	48	16	123	51	60	103	26	104	116	132	65	38	17	75	45	197	78
1-Methylnaphthalene	ND	ND	2.7	ND	ND	49.3	ND	3.1	ND	ND	42.8	ND	ND	ND	17	ND	7	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	7	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	58.2	ND	14.8	ND	ND	143.6	ND	27.1	ND	ND	198	34	ND	ND	60	12	102	23	ND	ND	10	27	93	ND	ND	33	19	38	27
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	75.1	ND	10.8	ND	ND	177.5	ND	8.9	15	ND	169.7	7	ND	ND	141	10	27	ND	ND	177	55	69	9	ND	ND	119	ND	72	ND
Acenaphthylene	9.3	ND	4	ND	ND	7.2	ND	4.1	ND	ND	6.2	ND	ND	ND	4	ND	4	ND	ND	ND	7	7	ND	ND	ND	3	ND	6	ND
Anthracene	3782.9	66.4	496.9	92	113.2	6464.1	39.6	1430.1	484	72.4	9125.4	1439	847	5	2006	556	4526	1060	112	2198	577	1027	3453	1003	24	895	615	1189	1390
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	14.8	24.7	27.2	ND	31.1	27.2	18.5	30.1	ND	35.2	30.6	24	16	10	47	28	40	52	ND	ND	35	58	25	19	13	19	36	82	54
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	24.1	ND	8.2	ND	ND	ND	ND	8.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	ND	45	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	12.2	ND	3.2	ND	ND	23.8	ND	6	ND	ND	32.4	ND	ND	ND	15	5	20	ND	ND	ND	ND	6	22	ND	ND	8	5	12	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	904.1	ND	153.8	9	ND	1520.6	ND	283.5	187	ND	2310.9	464	262	5	717	169	1544	330	ND	600	183	341	1187	331	12	300	199	345	459
Chrysene	101.8	42.2	92.5	29	84.9	108.7	14.1	120.3	31	94.1	139.8	60	66	13	119	95	93	87	ND	85	80	109	92	59	15	75	93	194	73
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	80.3	9.9	29.1	ND	ND	229.6	ND	46.4	33	ND	241.2	40	ND	ND	165	20	132	34	ND	141	37	46	134	ND	ND	110	23	89	42
Fluoranthene	371.2	58.9	271.8	45	163.8	463.1	84.3	249.1	46	118.9	503	156	106	18	564	185	235	206	16	635	483	481	205	106	22	477	83	873	97
Fluorene	318.2	9.4	60.9	ND	16.5	532.9	5.5	121.4	73	7	644.4	122	60	ND	396	51	359	94	ND	459	113	139	426	79	ND	239	66	243	102
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	20.4	ND	9.7	ND	ND	68.2	ND	17.3	ND	ND	95.4	26	ND	ND	30	7	72	14	ND	ND	7	19	48	ND	ND	19	13	30	19
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	3.1	33.5	52.2	17.3	11.7	9.9	47.2	71.1	17.7	14.8	9.6	ND	2.36	ND	7.9	ND	5.43	ND	ND	7.5	3.12	4.31	ND	2.34	ND	5.79	ND	12.1	ND
Phenanthrene	629.5	27.3	130.8	35	39.4	966.1	20.9	212.5	99	24.6	1118	166	99	6	832	100	488	164	37	1300	335	288	601	136	9	513	107	692	192
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	320	60	222.7	60	160.5	391.5	93.6	216.7	64	125	433.7	126	110	21	443	130	171	151	36	423	309	304	165	106	26	380	67	562	85
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																													
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																													
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 1B 9/30/88	LF#1 1B 10/10/88	LF#1 1B 11/28/88	LF#1 1B 12/13/88	LF#2 4A 1/25/88	LF#2 4A 3/8/88	LF#2 4A 4/15/88	LF#2 4A 5/9/88	LF#2 4A 6/17/88	LF#2 4A 6/24/88	LF#2 4A 8/18/88	LF#2 4A 9/30/88	LF#2 4A 10/10/88	LF#2 4A 11/28/88	LF#2 4A 12/13/88	LF#2 4B 1/25/88	LF#2 4B 3/8/88	LF#2 4B 4/15/88	LF#2 4B 5/9/88	LF#2 4B 6/17/88	LF#2 4B 6/24/88	LF#2 4B 8/18/88	LF#2 4B 9/30/88	LF#2 4B 10/10/88	LF#2 4B 11/28/88	LF#2 4B 12/13/88	LF#1 1A 2/6/89	LF#1 1A 3/13/89
Extractable Organics																												
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	29	130	85	164	51	26	51	136	37	51	94	48	123	113	183	50	28	41	100	39	45	88	63	105	134	163	59	3
1-Methylnaphthalene	ND	ND	8	ND	ND	ND	ND	37	ND	4	ND	ND	24	ND	4	ND	ND	ND	30	ND	3	ND	ND	26	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	54	25	ND	ND	10	71	5	76	35	ND	22	46	55	ND	ND	9	28	8	83	23	ND	25	14	29	8	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	210	113	63	ND	ND	5	229	ND	11	ND	ND	223	46	85	ND	ND	ND	190	ND	12	ND	ND	210	48	63	8	ND
Acenaphthylene	ND	ND	6	7	ND	ND	5	6	ND	3	ND	ND	ND	6	6	ND	ND	ND	5	ND	4	ND	ND	ND	6	5	18	ND
Anthracene	66	1693	1809	1599	206	249	295	1427	186	1973	2828	238	831	2299	2333	148	143	279	514	332	3288	1331	488	1235	831	1302	393	ND
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	ND	ND	35	44	53	29	22	46	34	50	47	ND	43	62	63	36	28	18	25	35	38	49	55	37	46	34	41	ND
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	ND	ND	ND	43	ND	ND	ND	19	2	ND	ND	ND	ND	18	24	ND	ND	ND	10	2	ND	ND	56	ND	16	ND	22	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	11	9	ND	ND	ND	18	ND	16	ND	ND	ND	11	16	ND	ND	ND	6	ND	14	ND	ND	ND	ND	8	2	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	ND	436	644	536	59	72	97	490	60	640	838	ND	193	834	804	39	29	92	176	110	1104	376	155	271	276	475	113	ND
Chrysene	ND	104	100	129	56	36	54	127	54	76	100	32	87	146	159	52	33	43	99	57	76	85	55	83	100	124	77	4
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	139	119	61	ND	ND	17	244	11	88	67	ND	153	92	127	ND	ND	16	154	16	88	27	ND	136	30	49	14	ND
Fluoranthene	39	705	666	617	78	52	97	685	71	174	159	48	660	532	666	77	49	67	612	77	171	123	85	651	504	668	210	6
Fluorene	ND	403	321	221	22	31	37	561	17	233	218	ND	401	323	418	16	13	35	306	46	215	83	44	406	96	139	42	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	27	13	ND	ND	9	25	4	48	17	ND	ND	19	28	ND	ND	8	11	6	56	11	ND	ND	14	19	9	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	ND	9.29	4.22	4.38	8.8	9.6	10.8	12.3	7.51	7.65	ND	10.1	6.22	6.88	5.91	9.9	9	12.1	11.7	7.25	7.08	ND	10.2	7.57	6.93	5.74	3.7	1.83
Phenanthrene	13	1170	800	422	48	65	68	1223	43	362	370	40	1175	668	840	36	34	63	731	87	321	133	107	1201	226	295	114	ND
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	43	497	422	395	77	55	103	532	65	122	133	78	444	363	451	78	51	73	489	66	122	111	87	433	362	460	158	6
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																												
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																												
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	LF#1 1A 5/1/89	LF#1 1A 5/9/89	LF#1 1A 7/15/89	LF#1 1A 7/24/89	LF#1 1A 9/22/89	LF#1 1A 11/11/89	LF#1 1A 11/13/89	LF#1 1B 2/6/89	LF#1 1B 3/13/89	LF#1 1B 5/1/89	LF#1 1B 5/9/89	LF#1 1B 7/15/89	LF#1 1B 7/24/89	LF#1 1B 9/22/89	LF#1 1B 11/11/89	LF#1 1B 11/13/89	LF#2 4A 2/6/89	LF#2 4A 5/1/89	LF#2 4A 5/9/89	LF#2 4A 7/15/89	LF#2 4A 9/22/89	LF#2 4A 11/11/89	LF#2 4A 11/13/89	LF#2 4B 2/6/89	LF#2 4B 5/1/89	LF#2 4B 5/9/89	LF#2 4B 7/15/89	LF#2 4B 9/22/89	LF#2 4B 11/11/89
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	91	111	83	ND	100	53	99	58	3	97	99	96	ND	91	54	94	111	123	45	89	90	142	96	121	113	58	84	129	68
1-Methylnaphthalene	ND	6	ND	ND	ND	ND	ND	3	ND	3	5	ND	ND	ND	ND	ND	ND	1	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	8	28	22	ND	ND	ND	ND	34	ND	84	32	ND	ND	6	ND	20	13	32	46	54	14	22	72	14	8	20	26	19	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	3	114	3	ND	ND	ND	41	6	ND	6	118	ND	ND	ND	ND	37	36	4	11	8	ND	ND	23	32	7	12	5	ND	ND
Acenaphthylene	2	7	4	ND	ND	ND	ND	7	ND	5	7	ND	ND	ND	ND	ND	9	3	ND	3	ND	ND	ND	7	3	8	3	ND	ND
Anthracene	350	909	1069	2	190	20	161	1759	ND	3149	1085	243	2	130	386	1504	1016	1226	1509	2709	399	1175	5810	818	370	735	1307	706	25
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	74	46	55	ND	68	ND	35	60	ND	123	12	40	ND	28	ND	32	59	114	16	86	38	53	27	67	129	27	68	54	23
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	42	17	ND	ND	ND	ND	ND	3	ND	47	15	ND	ND	26	ND	ND	10	47	14	ND	ND	44	ND	26	49	17	ND	ND	25
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	2	7	6	ND	ND	ND	ND	8	ND	17	8	ND	ND	ND	ND	ND	4	7	12	18	ND	ND	17	4	2	6	7	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	118	280	349	ND	51	ND	34	522	ND	1213	279	78	ND	43	76	528	255	422	479	972	130	427	2049	252	139	229	452	251	ND
Chrysene	172	131	94	ND	44	31	65	82	3	270	115	84	ND	53	30	70	144	239	62	118	56	115	84	128	159	109	83	82	33
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	16	82	41	ND	12	ND	19	68	ND	96	94	8	ND	6	ND	61	29	55	67	88	22	41	153	27	20	34	44	25	ND
Fluoranthene	125	533	94	ND	65	86	287	202	5	125	501	67	ND	78	68	254	602	199	130	91	103	327	210	601	151	194	82	188	47
Fluorene	36	206	130	ND	33	ND	66	200	ND	261	239	25	ND	15	29	168	97	144	187	248	43	126	393	85	39	106	153	91	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	8	17	15	ND	ND	ND	ND	20	ND	65	21	5	ND	8	ND	14	9	18	27	38	13	21	46	13	8	14	18	9	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	2.57	5.04	ND	ND	2.6	6.64	2.72	3.6	1.49	2.67	5.08	ND	ND	3.15	4.99	2.63	7.85	4.62	5.94	4.49	4.07	7.63	6.18	8.23	6.43	5.19	3.25	4.42	7.26
Phenanthrene	70	406	284	ND	52	26	198	313	ND	444	482	50	ND	33	39	291	204	304	316	446	87	211	514	183	105	201	259	135	14
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	112	350	86	2	58	70	200	175	6	104	313	61	1	70	59	185	362	150	101	80	87	261	138	363	125	141	71	183	54
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																													
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																													
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-1. 0 - 3 INCH LANDFARM OPERATION SOIL SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#2 4B 11/13/89	LF1AU 10/10/90	LF1BU 10/10/90	LF1CU 10/10/90	LF1DU 10/10/90	LF1EU 10/10/90	LF2AU 10/10/90	LF2BU 10/10/90	LF2CU 10/10/90	LF2DU 10/10/90	LF2EU 10/10/90	LF1AUS 10/15/91	LF1BUS 10/15/91	LF1CUS 10/15/91	LF1DUS 10/15/91	LF1EUS 10/15/91	LF2AUS 10/15/91	LF2BUS 10/15/91	LF2CUS 10/15/91	LF2DUS 10/15/91	LF2EUS 10/15/91	LF2A 2/15/96	LF1A 2/15/96
Extractable Organics																							
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	0.42	0.23J	0.90J	0.24J	2.1J	0.37J	2.1J	0.91J	0.64J	0.66J	ND	ND
1,2-Benzanthracene	107	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22J	0.27J	4.0J	0.14J	0.56J	0.22J	0.59J	0.46J	0.26J	0.26J	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	0.06J	ND	0.86J	0.028J	0.14J	0.092J	ND	0.087J	ND	0.081J	ND	ND
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	21	4.0J	5.9J	ND	ND	ND	ND	ND	ND	9.5	ND	2.7	0.93J	6.4J	1.1	7.7	2.1J	16J	4.6J	4.4J	5.1	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND
Acenaphthene	22	ND	ND	ND	ND	ND	ND	49	ND	ND	ND	0.95	0.52J	0.62J	0.36	0.78J	1.0J	2.5J	5.5J	1.3J	1.0J	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.8	1.7J	2.1J	1.4	1.4J	5.2	5.0J	4.7J	3.7J	3.8J	ND	ND
Anthracene	1023	88	230	29	35	70	100	350	900	170	70	54	23	140	36	350	41	310	120	75	64	10	5.7
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	11	10	11	15	9.6	13	25	17	8.6	11	7.0	6.9
Benzo(a)Pyrene	46	20	19	32	11	21	20	33	43	18	13	13	11	14	11	11	16	23	20	12	12	9.2	8.1
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	14
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	30	31	43	32	30	34	55	37	26	30	21	20
Benzo(g,h,i)Perylene	ND	19	20	24	16	18	16	24	41	19	18	7.4	4.6	6.4J	2.1	4.3J	7.2	10J	6.0J	7.0J	5.1	6.2	4.4
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.7	5.5
Biphenyl	ND	8.8	7.4	10	6.3J	ND	7.8	12	17	7.9	8.1	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND
Carbazole	380	26	46	43	ND	23	45	100	270	67	24	23	7.0	38	8.2	98	18	170	60	34	37	2.2	ND
Chrysene	76	22	27	42	17	22	21	35	58	22	18	12	13	15	18	3.6J	15	31	20	11	12	8.0	8.7
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	ND	ND	0.023J	ND	ND	0.024J	ND	0.028J	ND	0.022J	ND	ND
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	0.044J	ND	ND	ND	ND	0.10J	ND	ND	ND	0.087J	ND	ND
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	3.4	ND	ND	1.1	ND	2.0J	3.4J	3.4J	2.0J	2.5J	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND
Dibenzofuran	74	5.0J	6.7J	6.6J	ND	ND	ND	19	ND	ND	3.7J	2.7	1.2J	5.6J	1.6	9.3	2.6J	20	8.4	5.0J	5.1	ND	ND
Fluoranthene	182	58	19	140	29	51	35	92	110	74	36	22	17	15	24	22	20	78	37	19	20	11	10
Fluorene	118	14	4.9J	20	5.0J	6.0J	22	42	12	37	ND	6.9	2.6J	14	4.9	25	7.1	62	26	14	13	ND	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	9.6	5.6	7.9	4.4	5.3J	9.2	13J	9.1	8.8	7.3	7.4	5.1
Naphthalene	11	3.8J	4.4J	4.8J	ND	3.6J	ND	ND	ND	ND	3.5J	2.8	1.1J	3.4J	1.0	4.7J	2.2J	11J	4.3J	3.4J	3.5J	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-
Pentachlorophenol	5.89	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	1.6J	ND	0.79J	ND	3.8J	ND	4.6J	6.4J	4.1J	ND	ND
Phenanthrene	201	25	36	130	11	20	34	82	99	70	19	16	6.4	21	7.7	34	12	87	38	20	21	4.2	2.0
Phenol	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	143	44	50	150	28	41	26	55	130	51	34	20	18	34	28	25	21	64	35	17	19	-	-
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	0.19J	0.31J	ND	ND	ND	0.48J	ND	ND	0.34J	0.47J	ND	ND
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Inorganics																							
Arsenic	-	-	-	-	-	-	-	-	-	-	-	6.5	7.9	2.5	4.9	6.9	7.9	8.3	5.6	6.4	6.7	6.2	5.9
Chromium	-	-	-	-	-	-	-	-	-	-	-	6.2	8.2	12	5.5	6.7	15	11	6.2	7.1	7.8	1.3	1.3
Copper	-	-	-	-	-	-	-	-	-	-	-	37	30	39	22	44	42	44	41	35	39	8.2	7.7
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																							
Chloride	-	ND	29	35	ND	40	26	ND	ND	63	27	ND	29	ND	ND	ND	ND	ND	ND	46	ND	77	110
Nitrate + Nitrite-N	-	ND	ND	8.1	7.0	ND	ND	ND	ND	ND	ND	ND	ND	7.0	14	ND	6.9	ND	ND	ND	7.2	ND	ND
Total Kjeldahl Nitrogen -N	-	1600	1600	1900	1600	1400	1400	1700	2200	1300	190	1500	5000	1100	1200	1600	1300	1900	1600	1200	1700	2100	2100
Total Nitrogen	-	1600	1600	1900	1600	1400	1400	1700	2200	1300	190	1500	5000	1100	1200	1600	1300	1900	1600	1200	1700	-	-
Total Organic Carbon	-	35000	32000	39000	34000	30000	37000	36000	36000	36000	35000	33000	27000	35000	21000	31000	26000	34000	26000	32000	32000	46,000	41,000
Total Phosphorus	-	830	1100	1000	630	980	1100	920	740	910	1200	730	920	1000	700	1300	580	760	580	490	200	730	1200

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-2

TABLE 10-2. 9 - 12 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 River II 10/2/84	LF#2 Office V 10/2/84	LF#1 2A 3/21/85	LF#1 2A 4/25/85	LF#1 2A 7/11/85	LF#1 2A 8/23/85	LF#1 2A 11/13/85	LF#1 2A 12/16/85	LF#1 2B 3/21/85	LF#1 2B 4/25/85	LF#1 2B 7/11/85	LF#1 2B 8/23/85	LF#1 2B 11/13/85	LF#1 2B 12/16/85	LF#1 3A 7/15/85	LF#1 3B 7/15/85	LF#1 5A 1/10/85	LF#2 5A 3/21/85	LF#2 5A 4/25/85	LF#2 5A 7/11/85	LF#2 5A 8/23/85	LF#2 5A 11/13/85	LF#2 5A 12/16/85	LF#1 5B 1/10/85	LF#2 5B 3/21/85	LF#2 5B 4/25/85
Extractable Organics																										
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	-	-	*	ND	14.97	ND	ND	ND	ND	ND	11.43	ND	ND	ND	ND	ND	ND	48.8	*	66.52	8.958	43.35	ND	ND	17.9	*
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	27.5	ND	ND	ND	ND	ND	24.62	ND	ND	ND	ND	ND	21.78	ND	ND	ND	72.8	ND	ND	ND	ND	30.97	ND	14.2	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ND	17.8	ND	ND	5.309	ND	ND	ND	ND	ND	4.103	ND	ND	ND	ND	ND	ND	104	ND	36.03	17.58	52.34	ND	ND	578	8.47
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	-	-	ND	ND	ND	ND	ND	31.06	ND	ND	ND	ND	ND	24.32	ND	ND	ND	20.4	ND	ND	9.832	35.51	20.22	ND	ND	ND
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	-	-	ND	ND	ND	ND	ND	37.59	ND	ND	ND	ND	ND	46.83	ND	ND	ND	ND	ND	ND	ND	ND	34.61	ND	ND	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	26.6	ND	1.911	ND	ND	ND	ND	212	ND
Chrysene	ND	14.9	12.2	ND	21.94	ND	ND	ND	ND	ND	17.77	ND	ND	ND	ND	ND	ND	82.5	15	47.29	39.04	63.41	ND	ND	35.9	21.8
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.6	ND	ND	ND	ND	ND	ND	31.6	ND
Fluoranthene	15.7	89.7	19.4	18.3	40	ND	16.24	ND	13.9	*	25.64	ND	15.91	ND	ND	ND	ND	390	30.5	163	108	197.8	165.8	ND	192	62.6
Fluorene	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37.2	ND	ND	ND	ND	ND	ND	111	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	5.74	35.2	ND	ND	4.544	3.0826	ND	33.821	ND	ND	4.4451	3.0995	ND	28.269	ND	ND	2.28	165	82.7	45.25	100.47	363.38	184.91	1.81	81.2	28.3
Phenanthrene	*	32	7.99	ND	9.913	2.295	ND	54.99	ND	ND	9.065	2.745	ND	46.83	ND	ND	ND	102	*	20.77	3.157	68.02	53.03	ND	190	11.1
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	12.3	44.4	27.7	14.6	38.59	ND	12.8	ND	21.3	13.7	29.18	ND	12.38	ND	ND	ND	ND	349	41.7	153.2	105.4	186.5	146.1	ND	104	66.9
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																										
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																										
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-2. 9 - 12 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 2A 11/28/88	LF#1 2A 12/13/88	LF#1 2B 1/25/88	LF#1 2B 3/8/88	LF#1 2B 4/15/88	LF#1 2B 5/9/88	LF#1 2B 6/17/88	LF#1 2B 6/24/88	LF#1 2B 8/18/88	LF#1 2B 9/30/88	LF#1 2B 10/10/88	LF#1 2B 11/28/88	LF#1 2B 12/13/88	LF#2 5A 1/25/88	LF#2 5A 3/8/88	LF#2 5A 4/15/88	LF#2 5A 5/9/88	LF#2 5A 6/17/88	LF#2 5A 6/24/88	LF#2 5A 8/18/88	LF#2 5A 9/30/88	LF#2 5A 10/10/88	LF#2 5A 11/28/88	LF#2 5A 12/13/88	LF#2 5B 1/25/88	LF#2 5B 3/8/88	LF#2 5B 4/15/88
Extractable Organics																											
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	19	33	29	18	34	17	22	48	34	13	43	37	51	32	92	44	77	36	32	35	30	28	41	33	37	96	42
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	2	2	ND	2	ND	ND	ND	ND	ND	ND	4	3	4	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	9	11	ND	ND	5	11	3	5	6	ND	ND	ND	12	8	7	5	6	3	7	ND	ND	ND	11	44	9	10	5
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	6	9	ND	2	3	2	1	7	ND	ND	12	3	28	6	10	4	24	3	4	3	ND	15	7	8	7	9	5
Acenaphthylene	ND	3	ND	ND	4	ND	ND	1	ND	ND	ND	ND	3	3	ND	4	2	2	2	ND	ND	ND	3	3	3	7	ND
Anthracene	341	366	122	176	120	281	81	146	249	523	823	76	562	176	126	134	120	64	221	84	114	329	419	1487	228	91	52
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	28	20	21	15	19	12	22	37	23	ND	15	13	19	29	47	23	57	34	39	40	ND	18	32	19	33	80	22
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	14	ND	ND	ND	10	7	ND	35	ND	ND	ND	ND	ND	18	24	8	34	1	28	ND	ND	ND	18	ND	18	55	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	2	2	ND	ND	ND	2	ND	1	ND	ND	ND	ND	3	4	ND	2	2	ND	2	ND	ND	ND	ND	10	2	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	107	136	39	56	37	94	28	47	73	140	228	30	191	59	50	41	37	19	69	23	ND	91	141	635	63	29	14
Chrysene	30	42	39	23	49	27	32	43	28	ND	27	17	55	39	122	58	76	49	50	57	15	18	46	48	39	142	58
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	15	16	ND	6	8	12	3	10	6	20	ND	3	29	13	16	9	15	6	10	3	ND	ND	15	63	14	11	6
Fluoranthene	54	164	48	41	92	54	31	118	46	18	85	52	282	48	290	100	232	83	103	62	40	93	153	121	54	227	92
Fluorene	45	43	10	13	13	24	5	17	17	72	106	9	86	23	21	14	28	7	19	8	11	42	42	177	27	11	6
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	5	9	ND	ND	6	8	4	4	5	ND	ND	ND	9	6	10	6	6	5	7	2	ND	ND	8	28	6	9	7
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	1.93	2.05	7.5	3.06	7.18	3.39	3.56	3.51	ND	ND	15.5	1.61	2.89	17.8	42.7	30.1	33.6	17.6	13.3	17	33.5	ND	21	4.72	16.1	47.1	32.8
Phenanthrene	89	95	27	28	38	42	15	93	38	131	177	28	251	46	143	37	116	26	51	28	28	122	99	299	45	81	30
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	44	110	54	40	92	52	33	94	36	24	73	53	181	52	319	100	192	75	84	81	46	68	119	87	53	255	93
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																											
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																											
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-2. 9 - 12 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	LF#2 5B 7/11/85	LF#2 5B 8/23/85	LF#2 5B 11/13/85	LF#2 5B 12/16/85	LF#2 8A 1/10/85	LF#2 8B 1/10/85	LF#1 1A 11/4/86	LF#1 1B 11/4/86	LF#1 2A 1/20/86	LF#1 2A 1/25/86	LF#1 2A 1/29/86	LF#1 2A 2/18/86	LF#1 2A 3/18/86	LF#1 2A 4/15/86	LF#1 2A 5/9/86	LF#1 2A 6/20/86	LF#1 2A 8/11/86	LF#1 2A 10/6/86	LF#1 2A 12/8/86	LF#1 2B 1/20/86	LF#1 2B 1/25/86	LF#1 2B 1/29/86	LF#1 2B 2/18/86	LF#1 2B 3/18/86	LF#1 2B 4/15/86	LF#1 2B 5/9/86	LF#1 2B 6/20/86
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	57.91	4.694	27.58	ND	ND	ND	45.6	21.9	ND	ND	ND	ND	NS	2.567	3.696	34.87	8.187	66.1	15.9	ND	ND	ND	ND	28.58	4.15	45.06	14.37
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	1.127	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.62
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	2.0969	2.7479	3.9	ND	ND	ND	ND	ND	ND	ND	ND	1.8984
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	ND	ND	55.73	ND	ND	ND	ND	ND	80.93	ND	ND	NS	ND	2.31	5.435	ND	2.2	2.8	ND	ND	ND	ND	ND	ND	15.54	1.076
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	3.928	ND	2.3	ND	ND	ND	ND	ND	ND	ND	ND	2.723
Anthracene	67.46	8.47	12.54	ND	77	ND	5.1	4	ND	427.7	45.77	ND	NS	2.498	8.5528	23.661	28.329	89.9	7.2	ND	57.86	115.5	ND	101.5	4.873	144.88	16.132
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	ND	10.88	17.87	26.61	ND	ND	19.8	10.9	ND	ND	ND	ND	NS	ND	3.022	19.76	6.799	42.7	10.3	ND	ND	ND	ND	28.53	ND	10.79	14.09
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	ND	ND	ND	75.06	ND	ND	11.4	8.5	ND	ND	ND	ND	NS	ND	ND	11.6	5.07	27.3	8.5	ND	ND	ND	ND	ND	ND	ND	8.65
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	1.546	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.418
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	6.356	5.949	23.4	ND	ND	ND	ND	ND	ND	ND	22.2	4.636
Chrysene	41.22	29.82	72.4	ND	ND	ND	64.5	30.4	ND	ND	ND	ND	NS	15.8	21.15	57.24	10.23	102.1	29.6	ND	ND	ND	ND	64.8	13.17	52.34	28.2
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	ND	ND	ND	ND	ND	3	3.1	ND	ND	ND	ND	NS	ND	2.69	5.197	5.184	8	4.1	ND	ND	ND	ND	ND	ND	14.38	4.012
Fluoranthene	170.1	63.95	100.3	220.2	236	96.7	167.2	53.6	72.39	479	414.1	ND	NS	24.39	53.15	112	19.38	170	41.3	ND	391.1	486.7	ND	155.9	22.94	294.6	48.88
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	93.38	32.59	ND	NS	ND	ND	6.015	6.176	15.2	ND	ND	ND	19.19	ND	10.03	ND	23.12	2.518
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	ND	ND	1.6966	3.7394	10.7	ND	ND	ND	ND	ND	ND	ND	ND	2.1976
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	54.626	92.405	90.12	123.75	58	37.8	11.251	6.4797	ND	18.425	24.774	-	-	23.222	11.61	9.4697	6.6402	26.227	5.3982	ND	21.592	27.132	-	-	20.524	45.581	7.8285
Phenanthrene	18.74	9.958	ND	84.04	44.5	ND	10.3	15.9	ND	290.38	130.73	ND	NS	ND	18.023	19.412	14.901	37.8	8.2	ND	34.421	133.29	ND	26.768	ND	47.216	11.389
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	158.8	61.17	157.7	214.8	220	77.4	151.2	51.7	31.35	369.5	286	ND	NS	24.58	50.99	100.7	22.32	169.4	31.6	ND	177.9	350.8	ND	206.3	25.75	224.7	49.71
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																											
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																											
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-2. 9 - 12 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 2B 8/11/86	LF#1 2B 10/6/86	LF#1 2B 12/8/86	LF#2 5A 1/20/86	LF#2 5A 1/25/86	LF#2 5A 1/29/86	LF#2 5A 2/18/86	LF#2 5A 3/18/86	LF#2 5A 4/15/86	LF#2 5A 5/9/86	LF#2 5A 6/20/86	LF#2 5A 8/11/86	LF#2 5A 10/6/86	LF#2 5A 12/8/86	LF#2 5B 1/20/86	LF#2 5B 1/25/86	LF#2 5B 1/29/86	LF#2 5B 2/18/86	LF#2 5B 3/18/86	LF#2 5B 4/15/86	LF#2 5B 5/9/86	LF#2 5B 6/20/86	LF#2 5B 8/11/86	LF#2 5B 10/6/86	LF#2 5B 12/8/86	LF#1 2A 2/9/87	LF#1 2A 5/8/87
Extractable Organics																											
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	11.81	48.6	21.9	ND	ND	ND	ND	ND	10.19	64.66	16.94	21.9	13.7	35.4	ND	ND	ND	ND	ND	12.62	67.71	17.68	18.44	8.4	51.3	30.7	22.3
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.27	0.543	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.797	0.83	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	1.8697	2.3	ND	ND	ND	ND	ND	ND	ND	16.539	1.7177	3.958	ND	ND	ND	ND	ND	ND	ND	ND	15.707	2.4568	29.025	ND	ND	ND	4.2
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	1.7	ND	ND	ND	ND	ND	ND	ND	108.2	1.225	2.337	ND	11	ND	ND	ND	ND	ND	ND	112.4	3.758	2.615	ND	6.5	ND	3.9
Acenaphthylene	ND	3.7	ND	ND	ND	ND	ND	ND	ND	20.78	2.387	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.51	2.437	ND	ND	ND	ND	3.5
Anthracene	9.3201	20.5	4.7	ND	ND	ND	ND	110.1	138.3	87.69	34.958	206.87	2.6	28.5	ND	ND	ND	ND	ND	25.22	182.32	66.43	1812.3	ND	115.5	7.7	133.9
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	10.82	31.9	13.7	ND	ND	ND	ND	ND	22.76	16.37	17.23	18.15	ND	25	ND	ND	ND	ND	ND	16.02	17.65	15.44	15.63	ND	28.5	19	19.2
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	7.79	22	6.8	ND	ND	ND	ND	ND	ND	ND	9.77	9.5	ND	19.6	ND	ND	ND	ND	ND	ND	ND	7.4	9.53	ND	17.1	13.3	8.8
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.715	0.809	2.023	ND	ND	ND	ND	ND	ND	ND	ND	1.923	1.234	6.743	ND	ND	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	2.691	5.7	ND	ND	ND	ND	ND	ND	44.19	31.64	9.722	37.79	ND	5.7	ND	ND	ND	ND	ND	ND	49.95	13.92	556.2	ND	29.4	ND	45.7
Chrysene	13.8	81.6	34.4	ND	ND	ND	ND	ND	29.83	65.49	26.81	32.75	10.6	46.2	ND	ND	ND	ND	ND	28.17	71.32	29.35	25.8	ND	60.2	51.7	43
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	3.683	7.5	ND	ND	ND	ND	ND	ND	ND	52.45	3.987	10.47	ND	6.3	ND	ND	ND	ND	ND	ND	89.91	5.795	44.27	ND	8.8	ND	9.1
Fluoranthene	21.56	120	47.1	89.02	ND	ND	ND	51.18	52.2	316.4	40.6	68.49	13	109.2	79.21	66	ND	ND	35.75	38.67	320.5	51.99	46.62	9.6	208.2	68.2	60.5
Fluorene	1.558	2.4	ND	ND	ND	ND	ND	ND	10.47	129.3	3.675	18.65	ND	9.7	ND	ND	ND	ND	ND	3.149	113.5	6.491	130.5	ND	15.4	ND	18.3
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	2.4929	3.5	ND	ND	ND	ND	ND	ND	ND	4.9673	2.043	3.0491	ND	ND	ND	ND	ND	ND	ND	ND	2.6085	2.9067	12.197	ND	ND	ND	3.2
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	6.4646	24.553	5.198	35.229	ND	ND	-	-	46.506	452.81	25.901	22.071	3.5479	28.326	23.978	ND	ND	-	-	40.217	458.29	22.399	19.626	3.6845	28.865	ND	4.6
Phenanthrene	8.3853	18.7	7	ND	ND	ND	ND	15.272	26.13	173.16	11.68	40.841	6.8	36.2	ND	ND	ND	ND	ND	9.0598	238.1	19.13	177.08	3.2	53.9	9.7	36.6
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	23.6	123.9	43.4	154.9	ND	ND	ND	28.59	64.36	263.9	48.95	65.29	17.6	111.5	83.48	60.64	ND	ND	20.69	47.78	264.5	60.5	43.98	11.5	175.7	68	62.7
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																											
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																											
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-2. 9 - 12 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#2 5B 5/9/88	LF#2 5B 6/17/88	LF#2 5B 6/24/88	LF#2 5B 8/18/88	LF#2 5B 9/30/88	LF#2 5B 10/10/88	LF#2 5B 11/28/88	LF#2 5B 12/13/88	LF#1 2A 2/6/89	LF#1 2A 5/1/89	LF#1 2A 5/9/89	LF#1 2A 7/15/89	LF#1 2A 7/24/89	LF#1 2A 9/22/89	LF#1 2A 11/11/89	LF#1 2A 11/13/89	LF#1 2B 2/6/89	LF#1 2B 5/1/89	LF#1 2B 5/9/89	LF#1 2B 7/15/89	LF#1 2B 7/24/89	LF#1 2B 9/22/89	LF#1 2B 11/11/89	LF#1 2B 11/13/89	LF#2 5A 2/6/89	LF#2 5A 5/1/89	LF#2 5A 5/9/89
Extractable Organics																											
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	54	33	28	31	22	26	45	36	26	36	15	44	ND	49	57	63	24	44	17	48	ND	45	91	44	24	209	80
1-Methylnaphthalene	1	ND	1	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	2	1	ND	2	ND	ND	ND	ND	1	1	4
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	9	11	13	ND	ND	ND	16	20	ND	4	3	8	ND	12	ND	ND	24	4	6	48	ND	ND	ND	ND	12	3	10
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	19	3	4	ND	ND	ND	4	5	4	1	3	1	ND	ND	ND	5	2	2	2	2	ND	ND	ND	ND	2	6	21
Acenaphthylene	2	2	2	ND	ND	ND	3	2	11	2	ND	4	ND	ND	ND	ND	8	2	2	1	ND	ND	ND	ND	3	1	3
Anthracene	216	612	369	100	65	385	605	806	45	172	61	331	3	327	24	109	833	92	235	1809	2	76	10	69	521	89	278
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	43	36	33	35	ND	25	36	22	26	37	ND	29	ND	18	27	30	30	58	7	ND	ND	18	39	21	32	151	33
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	26	2	25	ND	ND	ND	19	ND	ND	20	10	22	ND	15	ND	11	18	26	11	ND	ND	ND	10	12	9	90	13
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	3	3	3	ND	ND	ND	3	4	ND	1	ND	2	ND	3	ND	ND	5	1	ND	14	ND	ND	ND	ND	3	1	2
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	73	169	113	31	ND	112	222	289	12	49	20	120	ND	121	ND	14	253	28	76	578	ND	20	ND	15	140	30	81
Chrysene	60	52	41	44	19	18	48	44	35	84	35	27	ND	33	41	45	35	99	21	44	ND	28	64	23	32	264	88
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	17	17	16	5	ND	ND	20	30	3	10	5	12	ND	13	ND	4	30	7	8	76	ND	4	ND	ND	20	8	23
Fluoranthene	172	69	83	54	48	53	164	129	85	48	33	18	ND	48	54	96	67	55	41	28	ND	46	77	63	89	398	369
Fluorene	35	42	31	9	ND	38	57	93	8	25	9	36	ND	40	ND	11	82	13	18	214	ND	9	ND	11	65	11	58
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	8	8	12	5	ND	ND	10	10	4	4	4	6	ND	9	ND	ND	14	5	6	26	ND	3	ND	ND	10	4	9
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	29.1	18.5	13	17.7	37.9	ND	17	4.88	2.86	2.79	1.67	ND	ND	3.51	8.3	1.98	2.21	3.49	1.72	ND	ND	3.19	10.8	2.07	8.96	5.57	11.1
Phenanthrene	80	64	48	25	18	78	117	172	37	45	23	61	ND	74	14	49	113	39	37	374	ND	20	14	44	99	188	184
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	144	60	71	52	52	45	126	95	63	41	29	16	1	40	54	73	55	50	35	20	ND	37	99	49	62	308	242
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																											
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																											
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND *Not Detected*
\- Not Analyzed

TABLE 10-2. 9 - 12 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 2A 9/19/87	LF#1 2A 11/8/87	LF#1 2A 11/20/87	LF#1 2B 2/9/87	LF#1 2B 5/8/87	LF#1 2B 9/19/87	LF#1 2B 11/8/87	LF#1 2B 11/20/87	LF#2 5A 2/9/87	LF#2 5A 5/8/87	LF#2 5A 9/19/87	LF#2 5A 11/8/87	LF#2 5A 11/20/87	LF#2 5B 2/9/87	LF#2 5B 5/8/87	LF#2 5B 9/19/87	LF#2 5B 11/8/87	LF#2 5B 11/20/87	LF#1 2A 1/25/88	LF#1 2A 3/8/88	LF#1 2A 4/15/88	LF#1 2A 5/9/88	LF#1 2A 6/17/88	LF#1 2A 6/24/88	LF#1 2A 8/18/88	LF#1 2A 9/30/88	LF#1 2A 10/10/88
Extractable Organics																											
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	33	19.7	100.9	16.3	25	32	11.8	36.3	11.3	30.9	72	20.9	12.8	13.3	32.5	60	29.7	15.8	19	24	23	16	26	26	27	14	52
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	ND	ND	3	ND	ND	ND	ND	4.4	ND	ND	ND	ND	4.2	ND	ND	ND	ND	ND	3	13	4	3	7	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	ND	24.2	ND	4	ND	ND	6.1	2.9	3.9	11	ND	ND	2.5	5.5	11	3.6	ND	ND	4	3	3	2	3	ND	ND	15
Acenaphthylene	ND	ND	6.7	ND	3.3	ND	ND	3.5	ND	2.6	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	3	ND	ND	2	ND	ND	ND
Anthracene	49	2.3	605.5	9.5	46.2	19	29.6	651.3	26.9	74.6	48	51	284.3	24	107.3	62	75.5	108.2	162	104	89	476	76	93	414	52	330
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	8	26.2	81.1	11.8	18	11	21.6	33.5	13.3	21.5	11	30.5	14.5	14.3	21.7	14	42.1	16.9	14	20	13	8	19	23	34	ND	25
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	ND	11.3	43.3	7.4	8.1	ND	11.1	21.1	7.7	8.2	ND	18.2	ND	ND	8.8	ND	30	ND	ND	12	ND	ND	ND	11	ND	ND	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	2	ND	145.4	ND	14.4	13	ND	129.7	ND	22.2	25	ND	62.8	ND	32.7	23	ND	16.4	49	26	26	166	26	25	107	ND	60
Chrysene	42	42.7	125.5	33.3	43.9	43	33.3	49.8	25.6	49.6	99	46.7	32.8	29.2	53.2	86	55	40.5	29	37	28	26	36	33	32	ND	35
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	ND	26.1	ND	5.8	ND	ND	16.1	ND	10.5	11	ND	ND	8.1	11.5	ND	ND	ND	ND	ND	8	22	5	5	9	ND	ND
Fluoranthene	59	63.7	282.1	68.6	73.1	66	32.1	110.7	72	121.6	298	45.6	66.1	79.1	133.6	237	67.6	63.6	44	64	41	47	51	64	35	21	138
Fluorene	7	2.6	63.5	ND	6.7	ND	3.6	36.9	3.4	8.6	9	11.1	17.6	3.7	18.3	ND	9.3	9.8	20	9	13	54	9	10	29	ND	31
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	ND	ND	2.5	ND	ND	ND	ND	6.9	ND	ND	ND	ND	4.5	ND	ND	ND	ND	ND	5	10	4	3	4	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	9.8	6.4	11.4	ND	4.7	8.2	6.1	16.3	110.3	101.9	75.1	13.3	2.5	115.8	104.3	63.9	15.2	2.4	4.4	3.07	4.2	3.43	3.66	6.4	ND	ND	17.8
Phenanthrene	15	12.9	287.4	16	18.8	14	10	88.9	12.9	23.4	26	19.5	36.6	15.4	42.5	24	32.7	24.8	41	28	28	86	23	28	53	12	99
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	79	68.5	203.2	64.6	71.2	83	36.8	104	69.4	116.3	291	41.3	64.7	79.1	123.7	241	66.8	64.7	44	60	45	47	47	53	33	24	107
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																											
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																											
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-2. 9 - 12 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#2 5A 7/15/89	LF#2 5A 9/22/89	LF#2 5A 11/11/89	LF#2 5A 11/13/89	LF#2 5B 2/6/89	LF#2 5B 5/1/89	LF#2 5B 5/9/89	LF#2 5B 7/15/89	LF#2 5B 9/22/89	LF#2 5B 11/11/89	LF#2 5B 11/13/89	LF1AM 10/10/90	LF1BM 10/10/90	LF1CM 10/10/90	LF1DM 10/10/90	LF1EM 10/10/90	LF2AM 10/10/90	LF2BM 10/10/90	LF2CM 10/10/90	LF2DM 10/10/90	LF2EM 10/10/90	LF1B 2/15/96
Extractable Organics																						
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
1,2-Benzanthracene	67	60	29	70	20	210	28	39	55	25	64	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
1-Methylnaphthalene	1	ND	ND	ND	ND	1	2	1	ND	ND	9	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
2-Methylnaphthalene	9	3	ND	15	3	13	24	5	7	ND	59	ND	15	ND	ND	ND	10	41	ND	ND	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Acenaphthene	2	ND	ND	4	3	5	4	3	2	ND	4	ND	ND	ND	ND	ND	28	ND	ND	ND	ND	ND
Acenaphthylene	3	4	ND	ND	3	1	3	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	482	106	7	584	183	488	874	179	174	14	3409	3.4J	200	58	4.7J	5.0J	280	400	72	15	50	ND
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.0
Benzo(a)Pyrene	74	29	16	38	20	156	25	39	28	14	36	5.8J	8.6	3.7J	3.4J	7.4	110	13	19	27	13	4.6
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Benzo(g,h,i)Perylene	57	16	ND	14	ND	126	12	25	17	ND	ND	7.3	9.4	6.5J	7.3	8.1	46	30	16	33	15	2.8
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.7
Biphenyl	2	ND	ND	ND	ND	3	5	1	ND	ND	21	5.0J	ND	ND	4.8J	ND	17	ND	13	34	7.1J	-
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Carbazole	134	35	ND	188	45	163	315	31	61	ND	1206	ND	90	9.6	ND	ND	200	160	23	4.6J	17	ND
Chrysene	62	37	20	49	28	265	38	51	35	17	51	9.5	15	8.9	7.3	8.1	120	18	22	40	19	5.8
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Dibenzofuran	11	5	ND	25	8	26	30	7	10	ND	147	ND	11	ND	ND	ND	26	20	3.8J	ND	ND	ND
Fluoranthene	54	58	36	82	83	409	58	70	50	41	79	13	34	8.9	9.5	4.4J	300	27	38	65	36	8.1
Fluorene	33	11	ND	80	19	65	74	11	24	ND	518	ND	27	5.8J	ND	ND	91	57	ND	ND	6.1J	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2
Naphthalene	9	6	ND	13	5	9	21	8	7	ND	33	ND	12	ND	ND	ND	ND	30	5.1J	3.7J	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	16.8	16.3	14.9	23.3	7.2	4.79	6.26	19.2	12.9	16.7	23.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	51	29	11	141	41	238	128	35	45	16	868	3.9J	41	8.1	ND	4.6J	200	86	17	12	14	2.8
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Pyrene	52	51	34	74	62	317	48	57	47	37	61	13	27	11	9.5	6.0J	200	23	36	66	34	-
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Inorganics																						
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.6
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.3
Miscellaneous Compounds																						
Chloride	-	-	-	-	-	-	-	-	-	-	-	ND	28	ND	ND	27	51	ND	ND	99	ND	110
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	6.7	16	ND	6.9	ND	ND	ND	ND	ND	12	ND
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	500	1600	1100	1000	ND	1400	1400	340	1400	1400	71
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	500	1600	1100	1000	ND	1400	1400	340	1400	1400	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	18000	26000	23000	17000	21000	51000	34000	24000	49000	31000	58,000
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	560	840	620	530	640	290	970	90	250	940	540

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-3

TABLE 10-3. 21 - 24 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters	LF#1	LF#2	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#2	LF#2	LF#1	LF#1	LF#1	LF#2	LF#2	LF#2	LF#2	LF#2	LF#1	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2
(mg/kg)	River III	Office VI	1B	2B	3A	3A	3A	3A	3A	3A	3B	3B	3B	3B	3B	3B	3B	4A	4B	4B	5B	6A	6A	6A	6A	6A	6A	6B	6B	6B	6B	6B	6B	6B	6B	7B	8B	9A	9B	10B
Extractable Organics	10/2/84	10/2/84	8/13/85	8/13/85	3/21/85	4/25/85	7/11/85	8/23/85	11/13/85	12/16/85	3/21/85	4/25/85	7/11/85	8/23/85	11/13/85	12/16/85	8/13/85	7/15/85	7/15/85	8/13/85	8/13/85	1/10/85	3/21/85	4/25/85	7/11/85	8/23/85	11/13/85	12/16/85	1/10/85	3/21/85	4/25/85	7/11/85	8/23/85	11/13/85	12/16/85	8/13/85	8/13/85	1/10/85	1/10/85	8/13/85
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	-	-	-	-	ND	ND	7.066	ND	ND	ND	ND	ND	7.439	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	13.27	ND	ND	ND	ND	ND	ND	6.861	-	ND	ND	-	-	ND	ND	-
1-Methylnaphthalene	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	15	-	-	ND	ND	ND	ND	ND	11.18	ND	ND	ND	-	ND	10.17	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
Acenaphthylene	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
Anthracene	ND	79.7	-	-	ND	ND	4.269	ND	ND	ND	ND	ND	5.203	-	ND	ND	-	ND	ND	-	-	ND	ND	62.1	4.092	ND	ND	ND	ND	ND	*	5.396	-	ND	ND	-	-	122	36.1	-
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	-	-	-	-	ND	ND	ND	ND	ND	6.199	ND	ND	ND	-	ND	9.288	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	4.514	ND	ND	ND	ND	-	ND	7.15	-	-	ND	ND	-
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	17.6	ND	ND	ND	ND	-	ND	4.799	-	-	ND	ND	-
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	ND	*	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
Chrysene	ND	16.9	-	-	ND	ND	7.761	ND	ND	ND	ND	ND	4.251	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	18.64	7.064	ND	ND	ND	ND	ND	25.53	-	ND	ND	-	-	ND	ND	-
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	*	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
Fluoranthene	*	140	-	-	ND	12	45.9	ND	ND	ND	ND	17.7	30.52	-	ND	ND	-	ND	ND	-	-	ND	7.76	87.1	54.57	19.37	ND	ND	ND	*	97.7	58.19	-	ND	ND	-	-	108	45.7	-
Fluorene	ND	20.7	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	ND	ND	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	-	-	ND	ND	-
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	0.764	95.2	0.9333	0.8581	ND	42.3	3.3515	2.954	ND	4.7591	ND	ND	5.6105	2.954	ND	ND	173.4	ND	ND	7.5725	19.632	0.52	ND	95.3	17.531	20.833	ND	12.964	0.464	ND	108	16.785	19.368	ND	7.8636	10.032	1.6334	14	37.9	1.7108
Phenanthrene	ND	44.4	-	-	ND	12.6	28.63	1.981	ND	15.79	17.1	*	6.763	-	ND	22.52	-	ND	ND	-	-	ND	ND	12.7	2.059	ND	ND	15.37	ND	*	9.75	4.933	-	ND	17.01	-	-	26.9	17.6	-
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	*	71.1	-	-	*	21.5	45.63	ND	ND	ND	*	18.7	32.27	-	ND	ND	-	ND	ND	-	-	ND	13.2	81	65.94	21.68	ND	ND	ND	*	97.6	77.46	-	ND	ND	-	-	97.3	23.8	-
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																																								
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																																								
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-3. 21 - 24 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg)	LF#1 2A 11/4/86	LF#1 2B 11/4/86	LF#1 3A 1/20/86	LF#1 3A 1/25/86	LF#1 3A 1/29/86	LF#1 3A 2/18/86	LF#1 3A 3/18/86	LF#1 3A 4/15/86	LF#1 3A 5/9/86	LF#1 3A 6/20/86	LF#1 3A 8/11/86	LF#1 3A 10/6/86	LF#1 3A 12/8/86	LF#1 3B 1/20/86	LF#1 3B 1/25/86	LF#1 3B 1/29/86	LF#1 3B 2/18/86	LF#1 3B 3/18/86	LF#1 3B 4/15/86	LF#1 3B 5/9/86	LF#1 3B 6/20/86	LF#1 3B 8/11/86	LF#1 3B 10/6/86	LF#1 3B 12/8/86	LF#2 6A 1/20/86	LF#2 6A 1/25/86	LF#2 6A 1/29/86	LF#2 6A 2/18/86	LF#2 6A 3/18/86	LF#2 6A 4/15/86	LF#2 6A 5/9/86	LF#2 6A 6/20/86	LF#2 6A 8/11/86	LF#2 6A 10/6/86	LF#2 6A 12/8/86	LF#2 6B 1/20/86	LF#2 6B 1/25/86	LF#2 6B 1/29/86	LF#2 6B 2/18/86	LF#2 6B 3/18/86	LF#2 6B 4/15/86	LF#2 6B 5/9/86
Extractable Organics																																										
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	4.3	4.5	ND	ND	20.59	ND	ND	ND	6.995	8.945	2.09	13.5	4.5	ND	ND	35.85	ND	ND	ND	5.948	5.082	3.521	10.1	13.9	ND	ND	ND	ND	5.543	3.031	10	17	11.21	9.5	40	ND	ND	ND	ND	ND	ND	5.598	4.333
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.247	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.367	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.409	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.319	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9884	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4832	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.673	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.676	ND	ND	5.4	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.679	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.018	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.62	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	88.43	54.24	ND	ND	30.89	34.267	24.494	1.1298	7.1	ND	ND	13.5	106.5	ND	ND	ND	57.349	11.5	1.2993	1.6	ND	ND	ND	ND	ND	6.557	21.23	3	40.129	17.809	4.7	21.4	ND	ND	ND	ND	ND	30.11	4.4074
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	5.202	8.218	ND	6.7	ND	ND	ND	ND	ND	ND	ND	5.025	5.327	ND	8.5	ND	ND	ND	ND	ND	ND	7.548	3.704	13.43	9.612	8.1	28.4	ND	ND	ND	ND	ND	7.548	3.926
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.42	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	3.19	ND	9.2	ND	ND	ND	ND	ND	ND	ND	ND	6.17	5.99	7.4	18.9	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.636	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.592	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.616	ND	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	13.17	7.101	ND	ND	ND	ND	ND	ND	ND	ND	ND	23.79	3.583	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.26	4.036	ND	5.7	ND	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	34.57	ND	ND	ND	12.54	18.82	1.601	19.5	ND	ND	ND	92.11	ND	ND	ND	11.98	12.22	2.128	15.4	ND	ND	ND	ND	ND	16.33	9.652	9.815	25.34	14.15	10.4	56.9	ND	ND	ND	ND	ND	12.76	4.093
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	3.658	3.293	1.356	ND	ND	ND	ND	ND	ND	ND	ND	3.338	1.99	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.477	3.204	ND	5.7	ND	ND	ND	ND	ND	ND
Fluoranthene	5.2	3.9	ND	229.9	227.2	ND	ND	ND	24.68	31.06	2.391	35.8	6	ND	271.1	392.7	ND	17.53	ND	23.44	16.99	2.994	24.8	10.1	147.3	ND	ND	ND	15.11	15.91	19.81	69.29	26.32	16.7	132.1	55.51	ND	ND	ND	ND	40.15	21.67
Fluorene	ND	ND	ND	18.92	32.18	ND	ND	ND	3.498	3.982	ND	ND	ND	ND	31.39	35.48	ND	ND	ND	8.061	1.378	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.146	2.143	ND	7.3	ND	ND	ND	ND	ND	3.726	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9645	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9504	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5228	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	ND	ND	ND	22.621	23.821	-	-	13.447	6.8392	3.5758	0.885	9.0682	1.6925	ND	22.057	33.885	-	-	14.176	6.612	2.7502	0.9716	9.0966	2.3982	35.525	ND	ND	-	-	23.338	24.707	45.461	9.7408	6.1612	34.912	27.504	ND	ND	-	-	32.82	19.839
Phenanthrene	ND	ND	ND	69.631	101.12	ND	ND	4.9564	17.169	7.4123	1.4123	5.4	ND	ND	101.17	174.11	ND	ND	ND	30.716	3.8575	1.8642	5.3	ND	ND	ND	ND	ND	ND	4.6908	3.4074	13.038	7.5937	4.2	29.9	ND	ND	ND	ND	ND	9.5359	6.3704
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	23.8	10.2	ND	135	219.2	ND	ND	ND	25.57	29.67	3.502	38.7	8.8	ND	136.2	264.4	ND	13.04	ND	23.79	19.36	3.992	27.4	13.3	136.2	ND	ND	ND	2.611	19.3	21.3	63	27.75	17.6	120.2	110.8	ND	ND	ND	ND	40.54	27.59
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																																										
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																																										
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-3. 21 - 24 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters	LF#2	LF#2	LF#2	LF#2	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1
(mg/kg)	6B	6B	6B	6B	3A	3A	3A	3A	3A	3B	3B	3B	3B	3B	6A	6A	6A	6A	6A	6B	6B	6B	6B	6B	6B	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3A	3B	3B	3B	3B	3B	3B	3B
Extractable Organics	6/20/86	8/11/86	10/6/86	12/8/86	2/9/87	5/8/87	9/19/87	11/8/87	11/20/87	2/9/87	5/8/87	9/19/87	11/8/87	11/20/87	2/9/87	5/8/87	9/19/87	11/8/87	11/20/87	2/9/87	5/8/87	9/19/87	11/8/87	11/20/87	1/25/88	3/8/88	4/15/88	5/9/88	6/17/88	6/24/88	8/18/88	9/30/88	10/10/88	11/28/88	12/13/88	1/25/88	3/8/88	4/15/88	5/9/88	6/17/88	6/24/88	8/18/88
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	13.92	13.32	10.1	41.8	3.4	3.1	23	ND	2.7	6.3	3.7	19	ND	2.2	2.5	11.1	26	13.1	12.7	4.4	9.9	11	14.2	10.4	10	2	37	17	6	3	31	20	27	14	13	11	2	34	6	5	3	32
1-Methylnaphthalene	0.551	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	1.7909	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51	ND	1	1	ND	ND	ND	ND	3	ND	ND	32	ND	2	ND	6
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	1.769	ND	ND	5.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	9	ND	11.5	ND	2.6	ND	ND	9.1	ND	ND	8	ND	1	ND	ND	ND	42	1	8	ND	ND	6	ND	ND	ND	ND
Acenaphthylene	1.49	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	ND	ND	ND	ND
Anthracene	33.849	9.8822	6.5	185.3	5.7	6.4	3	ND	20.9	3.2	17.4	3	ND	28	5.8	10.4	19	8	192.8	6.7	8.6	6	10.7	214.6	89	14	1497	27	48	20	54	ND	89	10	125	47	10	1233	8	4	13	251
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	11.79	10.8	8	30.9	ND	ND	5	4.3	4.7	3.5	ND	2	5.9	4.1	ND	6.5	9	21.8	11.6	ND	8.5	6	25.6	10.7	6	ND	10	8	4	5	18	11	16	10	10	5	ND	12	5	4	4	17
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	6.24	6.24	6.4	18.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.9	ND	ND	ND	ND	20.6	ND	ND	ND	ND	5	ND	ND	ND	7	ND	ND	ND	ND	ND	ND	6	ND	ND	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	1.317	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND	ND	ND	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	11.69	2.538	ND	47.8	ND	ND	ND	ND	ND	ND	5.7	ND	ND	ND	ND	4.1	12	ND	43.5	ND	3.7	2	ND	33.6	27	ND	483	10	12	6	17	ND	10	ND	45	12	ND	397	2	2	4	82
Chrysene	20.04	15.81	9.3	64.1	8	12.1	24	19.7	15.7	8.3	10.8	20	11.6	14.4	ND	17.7	27	29.4	25.9	ND	16.5	11	27.4	24.1	14	4	47	23	20	8	27	19	23	24	19	11	4	42	10	10	6	30
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	3.687	3.246	ND	11.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2	8	ND	9.9	ND	2.6	ND	ND	5.9	4	ND	66	3	2	1	2	ND	18	ND	7	ND	ND	44	2	2	1	8
Fluoranthene	48.01	35.08	14.7	141	15.1	11.8	68	15.8	17.5	7.8	11.4	60	10.8	18.2	17.1	37.9	69	35.3	75.4	16.6	26	29	33.3	63.5	21	8	83	51	16	7	26	38	130	58	78	26	9	71	20	12	6	31
Fluorene	4.402	1.644	ND	19.4	ND	ND	ND	ND	ND	ND	2.3	ND	ND	ND	ND	2.1	10	3	31.5	ND	2.7	ND	3.1	15.1	9	ND	195	4	4	2	4	ND	45	2	21	5	ND	112	2	ND	2	21
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1.9163	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	1	1	ND	ND	ND	1	2	ND	ND	18	ND	2	1	4
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	51.858	8.8274	5.9304	37.134	ND	ND	ND	1.5	1..4	ND	ND	ND	1.9	1.3	26.6	5.9	17	2.4	3.3	27.5	4.9	7.6	2.3	3.8	1.7	0.695	ND	2.67	ND	ND	ND	2.78	134	4.66	2.67	2.2	0.829	ND	2.49	ND	ND	ND
Phenanthrene	15.108	9.0501	3.7	46.8	4.9	3.5	5	ND	5.1	2.2	5.1	7	ND	10.3	2.9	12.3	60	19.2	58.4	3.2	16.9	8	19.8	26.3	17	5	325	24	8	4	10	ND	118	5	69	15	4	171	10	6	5	30
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	46.82	34.72	14.1	127.8	22.1	9.8	73	16.8	18.4	8.8	10.7	65	11.2	18.6	17.3	32.8	63	34	64.6	18.1	22.1	28	26.7	56	21	7	81	48	12	7	29	37	98	55	54	23	9	75	19	10	6	30
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																																												
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																																												
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-3. 21 - 24 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters	LF#1	LF#1	LF#1	LF#1	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#2	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#1	LF#2	LF#2
(mg/kg)	3B	3B	3B	3B	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6A	6B	6B	6B	6B	6B	6B	6B	6B	6B	6B	6B	3A	3A	3A	3A	3A	3A	3A	3B	3B	3B	3B	3B	3B	3B	6A	6A
Extractable Organics	9/30/88	10/10/88	11/28/88	12/13/88	1/25/88	3/8/88	4/15/88	5/9/88	6/17/88	6/24/88	8/18/88	9/30/88	10/10/88	11/28/88	12/13/88	1/25/88	3/8/88	4/15/88	5/9/88	6/17/88	6/24/88	8/18/88	9/30/88	10/10/88	11/28/88	12/13/88	2/6/89	5/1/89	5/9/89	7/15/89	9/22/89	11/11/89	11/13/89	2/6/89	5/1/89	5/9/89	7/15/89	9/22/89	11/11/89	11/13/89	2/6/89	5/1/89
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Benzanthracene	21	23	23	12	18	11	10	4	10	12	21	ND	18	22	13	16	11	10	2	7	24	10	ND	10	4	12	12	60	32	8	ND	ND	9	8	24	30	21	ND	ND	13	24	56
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	1
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	5	4	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	3	ND	ND	ND	ND	ND	4	2	ND	ND	ND	ND	ND	1	2	7	ND	ND	ND	3	2
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ND	54	2	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	1	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	1	6	ND	ND	ND	ND	2	ND	ND	1	ND	ND	ND	5	1
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	2	ND	ND	ND	ND	ND	1	2	1	ND	ND	ND	1	1
Anthracene	ND	147	210	135	40	7	10	17	58	40	46	ND	114	52	26	17	60	8	3	4	54	168	16	8	31	49	17	224	15	4	6	ND	ND	11	23	12	395	6	ND	ND	80	52
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)Pyrene	21	18	14	15	13	8	6	4	8	15	10	ND	20	13	20	11	9	3	4	8	16	6	ND	17	ND	12	10	46	21	ND	ND	ND	ND	16	27	7	33	ND	ND	ND	21	63
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)Perylene	11	ND	ND	ND	9	4	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	19	6	ND	ND	ND	ND	10	12	6	ND	ND	ND	ND	10	29
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	1	ND
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	ND	27	73	49	12	ND	3	6	5	13	14	ND	30	12	9	4	19	2	ND	3	16	54	ND	ND	ND	16	7	83	7	ND	ND	ND	ND	4	8	5	150	ND	ND	ND	24	17
Chrysene	35	32	34	20	20	12	10	7	22	18	18	ND	12	14	22	18	15	8	4	13	30	11	ND	16	ND	19	20	127	49	8	ND	ND	13	13	51	44	36	ND	ND	14	32	85
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ND	27	6	6	ND	ND	ND	ND	ND	2	ND	ND	ND	2	ND	ND	5	ND	ND	ND	3	5	ND	ND	ND	ND	2	9	5	ND	ND	ND	ND	1	2	3	10	ND	ND	ND	5	4
Fluoranthene	47	181	82	39	32	16	17	7	22	30	31	25	93	30	32	23	18	18	6	13	66	10	19	58	8	39	62	62	87	6	7	ND	21	26	30	70	52	8	ND	34	100	72
Fluorene	ND	71	20	17	5	ND	ND	3	2	4	4	ND	12	6	4	2	7	ND	ND	ND	4	13	ND	ND	4	8	4	24	6	ND	ND	ND	ND	1	2	2	29	ND	ND	ND	12	6
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	ND	ND	3	3	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	2	ND	ND	ND	ND	ND	1	3	2	ND	ND	ND	ND	2	1	3	4	ND	ND	ND	4	2
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	3.08	149	3.68	1.48	3.2	1.79	4.13	ND	8.24	4.95	5.24	28.5	1.89	5.12	5.05	3.2	3.88	2.52	ND	8.66	5.17	2.68	23.1	1.95	5.11	3.58	4.97	1.73	5.41	ND	0.77	1.08	1.27	6.3	2.1	5.13	1.73	ND	1.18	1.39	14.7	1.16
Phenanthrene	6	187	41	36	11	9	6	6	10	18	9	ND	27	13	15	9	18	7	3	4	29	27	4	11	10	22	51	45	44	2	3	ND	7	9	8	23	67	4	ND	5	35	37
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	46	136	79	30	30	16	17	6	19	24	28	31	86	27	31	23	17	17	5	10	53	15	21	57	8	37	43	67	70	5	7	ND	17	23	30	67	39	5	ND	31	69	58
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganics																																											
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																																											
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-3. 21 - 24 INCH LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/kg) Extractable Organics	LF#2 6A 5/9/89	LF#2 6A 7/15/89	LF#2 6A 9/22/89	LF#2 6A 11/11/89	LF#2 6A 11/13/89	LF#2 6B 2/6/89	LF#2 6B 5/1/89	LF#2 6B 5/9/89	LF#2 6B 7/15/89	LF#2 6B 9/22/89	LF#2 6B 11/11/89	LF#2 6B 11/13/89	LF1AL 10/10/90	LF1BL 10/10/90	LF1CL 10/10/90	LF1DL 10/10/90	LF1EL 10/10/90	LF2AL 10/10/90	LF2BL 10/10/90	LF2CL 10/10/90	LF2DL 10/10/90	LF2EL 10/10/90	LF1ALS 10/15/91	LF1BLS 10/15/91	LF1CLS 10/15/91	LF1DLS 10/15/91	LF1ELS 10/15/91	LF2ALS 10/15/91	LF2BLS 10/15/91	LF2CLS 10/15/91	LF2DLS 10/15/91	LF2ELS 10/15/91	LF2B 2/15/96
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.092J	0.066J	0.040J	0.022J	0.028J	0.078J	0.18J	0.27J	2.3J	0.59J	ND
1,2-Benzanthracene	16	16	8	ND	7	23	45	22	10	8	ND	6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-	-	-	-	-	-
1-Methylnaphthalene	ND	1	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17J	0.11J	0.097J	0.070J	0.063J	0.13J	0.29J	0.34J	1.6J	0.41J	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	0.057J	0.050J	ND	ND	0.082J	0.037J	0.12J	ND	ND	ND
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	3	1	ND	ND	ND	4	3	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	0.29J	0.18J	0.14J	0.067J	0.11J	0.22J	0.88J	0.85J	8.0J	2.4J	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Acenaphthene	2	ND	ND	ND	ND	2	1	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	1.9J	1.1J	0.15J	0.18J	0.070J	0.62J	1.6J	1.7J	92	8.1J	ND
Acenaphthylene	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.59J	4.1J	0.58	0.13J	0.35	2.4J	2.4J	4.3J	5.4J	5.0J	ND
Anthracene	84	38	6	ND	15	248	130	49	18	8	ND	ND	3.7J	4.6J	6.8J	3.6J	ND	ND	66	ND	290	14	5.7	16	2.3	1.0	1.8	9.5	19	84	170	93	5.0
Benzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	24	31	5.7	2.1	2.0	12	12	28	130	63	4.3
Benzo(a)Pyrene	5	11	ND	ND	ND	21	30	4	ND	ND	ND	ND	39	10	42	18	ND	ND	21	18	100	11	14	21	4.1	1.8	1.5	9.6	9.2	27	61J	29J	6.2
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	61	18	3.4	4.4	32	21	81	190	90	14
Benzo(g,h,i)Perylene	6	ND	ND	ND	ND	9	23	20	ND	ND	ND	ND	32	10	22	16	3.5J	ND	41	11	65	12	6.5	9.1	1.8	0.70	0.60	3.7J	5.5	5.6J	6.7J	8.3J	4.2
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5
Biphenyl	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	16	3.9J	6.5J	7.4J	ND	ND	16	4.2J	14	8.6	-	-	-	-	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Carbazole	23	9	ND	ND	ND	46	42	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	30	ND	75	1.9J	1.1J	5.4J	0.97	0.98	1.1	3.1J	6.8	15	46J	28J	ND
Chrysene	31	12	6	ND	7	33	74	36	7	5	ND	ND	59	18	59	40	3.7J	3.6J	31	32	150	16	28	36	8.9	3.0	2.9	18	15	41	150	69	5.5
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	0.040J	0.026J	ND	ND	ND
Cresol m & p	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	0.047J	ND	ND	ND	0.070J	ND	ND	ND	ND	ND
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.9J	2.3J	0.58	0.26J	ND	1.2J	2.6J	4.0J	6.6J	5.1J	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND
Dibenzofuran	5	1	ND	ND	ND	7	6	3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.6J	ND	20	ND	0.89J	0.31J	0.18J	0.21J	0.14J	0.49J	1.7J	2.2J	21J	5.6J	ND
Fluoranthene	45	9	12	ND	13	85	52	59	7	16	ND	14	80	20	120	71	6.8J	5.0J	82	47	500	32	77	72	12	4.7	3.7	24	30	83	520	350	8.2
Fluorene	8	3	2	ND	ND	20	13	6	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	54	ND	2.4J	1.1J	0.20J	0.21J	0.18J	1.2J	2.8J	7.2J	59J	19J	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.2	12	1.9	0.74	0.70	5.2	6.8	9.8	18J	12J	5.3
Naphthalene	5	1	ND	ND	ND	4	3	2	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	2.1J	0.56J	0.27J	0.23J	0.088J	0.13J	0.36J	1.4J	1.9J	14J	2.5J	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Pentachlorophenol	2.15	2.03	1.79	2.17	7.75	20.9	1.44	1.69	1.94	1.9	1.48	8.37	ND	ND	ND	ND	ND	ND	ND	ND	20J	ND	3.9J	4.3J	1.3J	ND	0.070J	2.8J	10	22J	150J	19J	ND
Phenanthrene	17	7	10	ND	9	38	35	21	4	7	ND	ND	6.2J	ND	13	14	ND	ND	24	6.0J	130	5.7	15	17	1.4	3.3	0.98	4.1	13	21	91	45	2.8
Phenol	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	ND	ND	2.2J	ND	ND
Pyrene	35	8	9	ND	13	60	43	46	7	10	ND	12	80	20	110	68	6.5J	4.7J	78	41	500	30	69	62	10	5.7	4.2	25	25	74	980	310	-
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	0.44J	0.13J	ND	0.045J	0.25J	0.52J	0.85J	3.5J	1.1J	ND
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ND	ND	ND	ND	ND	ND	0.048J	ND	ND	ND	ND
Inorganics																																	
Arsenic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	13	4.9	15	9.9	18	84	14	22	9.5	13
Chromium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	7.9	5.4	1.9	2.8	12	100	9.8	21	15	1.5
Copper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	35	38	12	17	120	140	62	150	51	7.9
Lead	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Miscellaneous Compounds																																	
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	ND	26	77	ND	ND	ND	ND	ND	85	ND	ND	ND	ND	ND	ND	ND	ND	ND	100	ND	150
Nitrate + Nitrite-N	-	-	-	-	-	-	-	-	-	-	-	-	ND	8.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.3	ND	6.1	12	ND	ND	ND	ND
Total Kjeldahl Nitrogen -N	-	-	-	-	-	-	-	-	-	-	-	-	1200	7500	1300	330	470	170	900	520	290	520	980	1000	1000	290	300	1900	840	1100	4900	1300	1600
Total Nitrogen	-	-	-	-	-	-	-	-	-	-	-	-	1200	7500	1300	330	470	170	900	520	290	520	980	1000	1000	300	300	1900	850	1100	4900	1300	-
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	-	-	25000	15000	21000	26000	8000	3700	31000	13000	44000	20000	24000	22000	16000	5000	5900	21000	21000	28000	47000	23000	49,000
Total Phosphorus	-	-	-	-	-	-	-	-	-	-	-	-	900	450	250	240	320	120	390	200	130	370	980	460	520	240	270	470	440	280	610	200	300

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-4

TABLE 10-4. SUBSTRATE LANDFARM OPERATION SAMPLES - SEMI-VOLATILES, INORGANICS, AND MISCELLANEOUS COMPOUNDS
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY
WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/kg)	LF1AS	LF1BS	LF1CS	LF1DS	LF1ES	LF2AS	LF2BS	LF2CS	LF2DS	LF2ES	LF1C	LF2C
Extractable Organics	10/10/90	10/10/90	10/10/90	10/10/90	10/10/90	10/10/90	10/10/90	10/10/90	10/10/90	10/10/90	2/15/96	2/15/96
1,1-Biphenyl	-	-	-	-	-	-	-	-	-	-	ND	ND
1,2-Benzanthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	-
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	ND	ND
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	ND	ND
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	ND	ND
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-	ND	ND
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-	ND	ND
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	ND	ND
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	3.0J	ND	0.36J	ND	ND	0.97	ND	ND	ND
Benzo(a)Anthracene	ND	ND	ND	13	ND	1.2	0.21J	ND	1.0	ND	ND	ND
Benzo(a)Pyrene	-	-	-	-	-	-	-	-	-	-	ND	ND
Benzo(b)fluoranthene	-	-	-	-	-	-	-	-	-	-	ND	0.68
Benzo(b,k)Fluoranthene	-	-	-	-	-	-	-	-	-	-	ND	0.68
Benzo(g,h,i)Perylene	ND	ND	ND	5.9J	ND	1.3	0.30J	ND	0.97	ND	ND	ND
Benzo(k)fluoranthene	-	-	-	-	-	-	-	-	-	-	ND	ND
Biphenyl	ND	ND	ND	ND	ND	0.71	ND	ND	0.47	ND	-	-
bis(2-Chloroethyl)ether	-	-	-	-	-	-	-	-	-	-	ND	ND
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	19	ND	1.9	0.35J	ND	1.4	ND	ND	0.48
Cresol (ortho)	-	-	-	-	-	-	-	-	-	-	ND	ND
Cresol m & p	-	-	-	-	-	-	-	-	-	-	ND	ND
Dibenzo(a)Anthracene	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-	-	-	-	-	-	-	ND	ND
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	24	ND	2.3	0.63	ND	2.3	ND	ND	0.88
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene	-	-	-	-	-	-	-	-	-	-	ND	ND
Naphthalene	ND	ND	ND	ND	ND	0.33J	ND	ND	ND	ND	ND	ND
p-Chloro-m-cresol	-	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	0.80J	ND	ND	ND
Phenanthrene	ND	ND	ND	6.5J	ND	0.49	ND	ND	0.40J	ND	ND	0.44
Phenol	-	-	-	-	-	-	-	-	-	-	ND	ND
Pyrene	ND	ND	ND	23	ND	2.0	0.60	ND	2.2	ND	-	-
Tetrachlorophenols	-	-	-	-	-	-	-	-	-	-	ND	ND
Trichlorophenols	-	-	-	-	-	-	-	-	-	-	ND	ND
Inorganics												
Arsenic	-	-	-	-	-	-	-	-	-	-	6.4	5.3
Chromium	-	-	-	-	-	-	-	-	-	-	ND	ND
Copper	-	-	-	-	-	-	-	-	-	-	ND	ND
Miscellaneous Compounds												
Chloride	ND	ND	ND	ND	21	ND	ND	ND	64	ND	ND	ND
Nitrate + Nitrite-N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen -N	58	88	67	1500	ND	1100	920	67	190	90	140	710
Total Nitrogen	58	88	67	1500	ND	1100	920	67	190	90	-	-
Total Organic Carbon	ND	120	ND	25000	ND	26000	230	580	4700	490	930	2,200
Total Phosphorus	40	42	66	340	88	800	61	49	580	53	66	65

Notes:
ND Not Detected
\- Not Analyzed

TABLE 10-5

TABLE 10-5. LYSIMETER LANDFARM OPERATION SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameter (mg/L) Extractable Organics	LF1 8/13/84	LF1 12/7/84	LF1 2/27/85	LF1 4/11/85	LF1 6/24/85	LF1 8/8/85	LF1 12/12/85	LF1 3/6/85	LF2 8/13/84	LF2 12/7/84	LF2 2/27/85	LF2 4/11/85	LF2 6/24/85	LF2 8/8/85	LF2 9/12/85	LF2 10/15/85	LF2 11/19/85	LF2 1/10/86	LF2 2/11/86	LF2 4/1/86	LF2 5/7/86	LF2 6/17/86	LF2 8/4/86	LF2 10/1/86	LF2 12/1/86	LF2 2/3/87	LF2 5/5/87
1-Methylnaphthalene	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	0.009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)Fluoranthene + Benz(k)Fluoranthene	0.01	0.063	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	ND	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene + Benz(a)Anthracene	0.009	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)Pyrene + Dibenzo(a,h)Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ND	0.051	0.03	0.01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.11	ND	ND	ND	0.03
Pentachlorophenol	0.41	ND	0.03	0.02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene + Anthracene	0.056	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	ND	ND	ND	0.03	ND	ND	ND	ND
Phenol	0.009	ND	ND	ND	ND	ND	ND	ND	0.005	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	0.017	ND	ND	ND	ND	ND	ND	ND	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	ND	ND	ND	ND	ND	ND	ND	ND

Note:
ND Not Detected

TABLE 10-6

TABLE 10-6. COLUMN LEACHABILITY LANDFARM OPERATION SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L) Extractable Organics	Day 0 WILCORE 1,6 1/25/89	Day 0 WILCORE 2X,5X 1/25/89	Day 0 WILCORE 3X,8X 1/25/89	Day 0 WILCORE 4,10 1/25/89	Day 0 WILCORE 7,11 1/25/89	Day 0 WILCORE 9X,12X 1/25/89	Day 30 WILCORE 1,6 1/25/89	Day 30 WILCORE 2X,5X 1/25/89	Day 30 WILCORE 3X,8X 1/25/89	Day 30 WILCORE 4,10 1/25/89	Day 30 WILCORE 7,11 1/25/89	Day 30 WILCORE 9X,12X 1/25/89
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbazole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Benzanthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)Pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(ghi)Perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorophenol	ND	0.349	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Note:
ND Not Detected

TABLE 10-6. COLUMN LEACHABILITY LANDFARM OPERATION SAMPLES - SEMI-VOLATILES
SOUTHERN WOOD PIEDMONT AND NORTH CAROLINA STATE PORTS AUTHORITY WILMINGTON, NORTH CAROLINA FACILITY

Parameters (mg/L) Extractable Organics	Day 60 WILCORE 1,6 2/3/89	Day 60 WILCORE 2X,5X 2/3/89	Day 60 WILCORE 3X,8X 2/3/89	Day 60 WILCORE 4,10 2/3/89	Day 60 WILCORE 7,11 2/3/89	Day 60 WILCORE 9X,12X 2/3/89	Day 60 WILCORE 1,6 2/14/89	Day 60 WILCORE 2X,5X 2/14/89	Day 60 WILCORE 3X,8X 2/14/89	Day 60 WILCORE 4,10 2/14/89	Day 60 WILCORE 7,11 2/14/89	Day 60 WILCORE 9X,12X 2/14/89
Naphthalene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
2-Methylnaphthalene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
1-Methylnaphthalene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Biphenyl	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Acenaphthylene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Acenaphthene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Dibenzofuran	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Fluorene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Phenanthrene	ND	ND	ND	ND	ND	0.019	-	-	-	-	-	-
Anthracene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Carbazole	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Fluoranthene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Pyrene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
1,2-Benzanthracene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Chrysene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Benzo(a)Pyrene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Benzo(ghi)Perylene	ND	ND	ND	ND	ND	ND	-	-	-	-	-	-
Pentachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

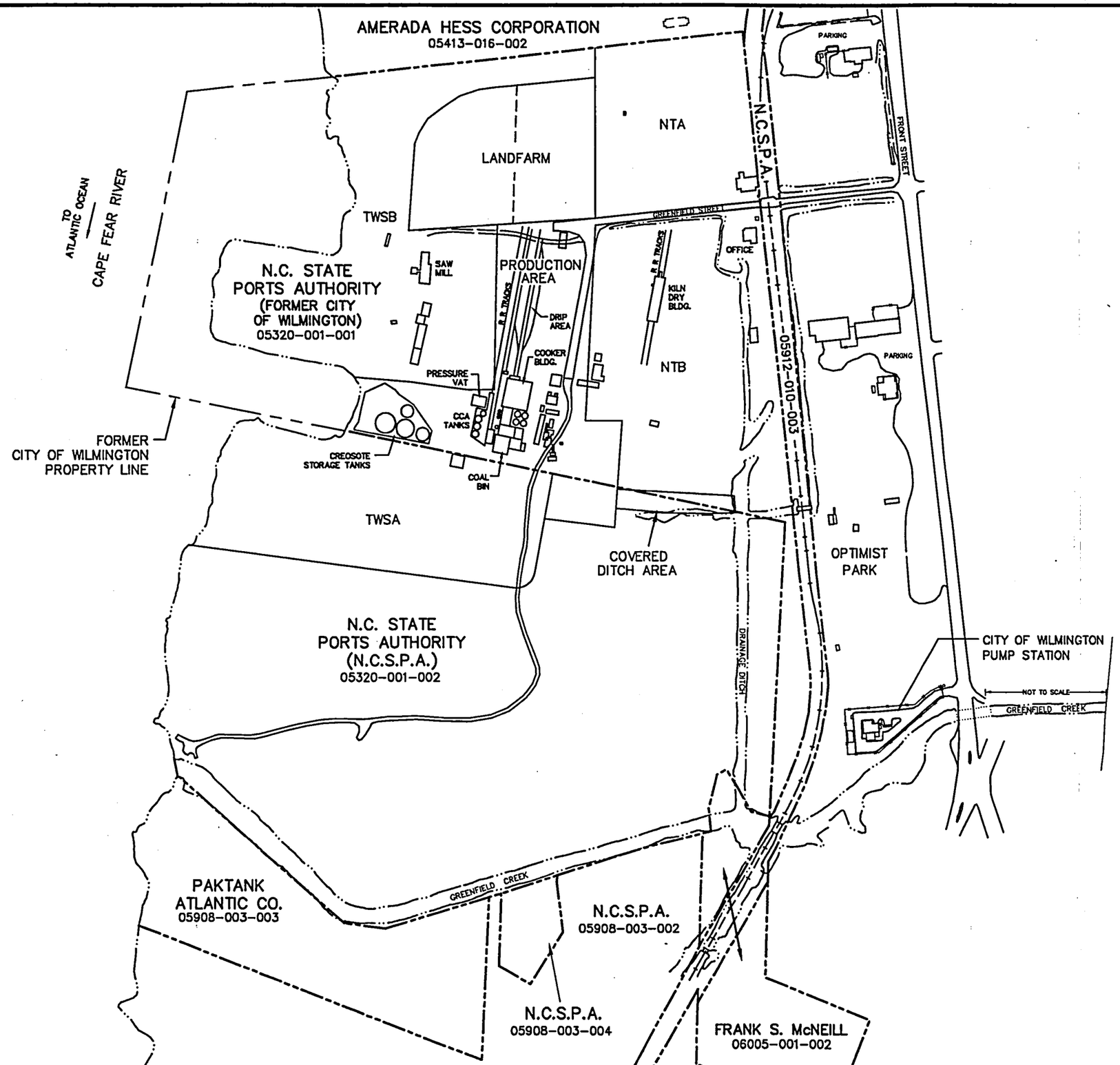
Note:
ND Not Detected

FIGURES

REFERENCE: USGS 7.5 MINUTE
WILMINGTON, NC QUADRANGLE
PHOTOREVISED 1979

GRAPHIC SCALE
0 1000 2000
1 inch = 2000ft.

Schnabel Engineering Schnabel Engineering Associates, Inc. 104 Corporate Blvd., Suite 410 West Columbia, SC 29169 Phone: 803-796-6240	SCALE 1"=2000' DRAWN BY CAB CHECKED BY GBK DATE 9/30/98	SITE LOCATION MAP SOUTHERN WOOD PIEDMONT CO. WILMINGTON, NEW HANOVER COUNTY, N.C. FACILITY	FIGURE NO. 1 CADD NO. SWPSITE PROJECT NO. 979007.A



LEGEND

NTA	NON TREATED WOOD STORAGE AREA A
NTB	NON TREATED WOOD STORAGE AREA B
TWSA	TREATED WOOD STORAGE AREA A
TWSB	TREATED WOOD STORAGE AREA B

GRAPHIC SCALE

0 150 300

1 inch = 300 ft.

SITE AND ADJACENT PROPERTY USE MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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Schnabel Engineering Associates, Inc.
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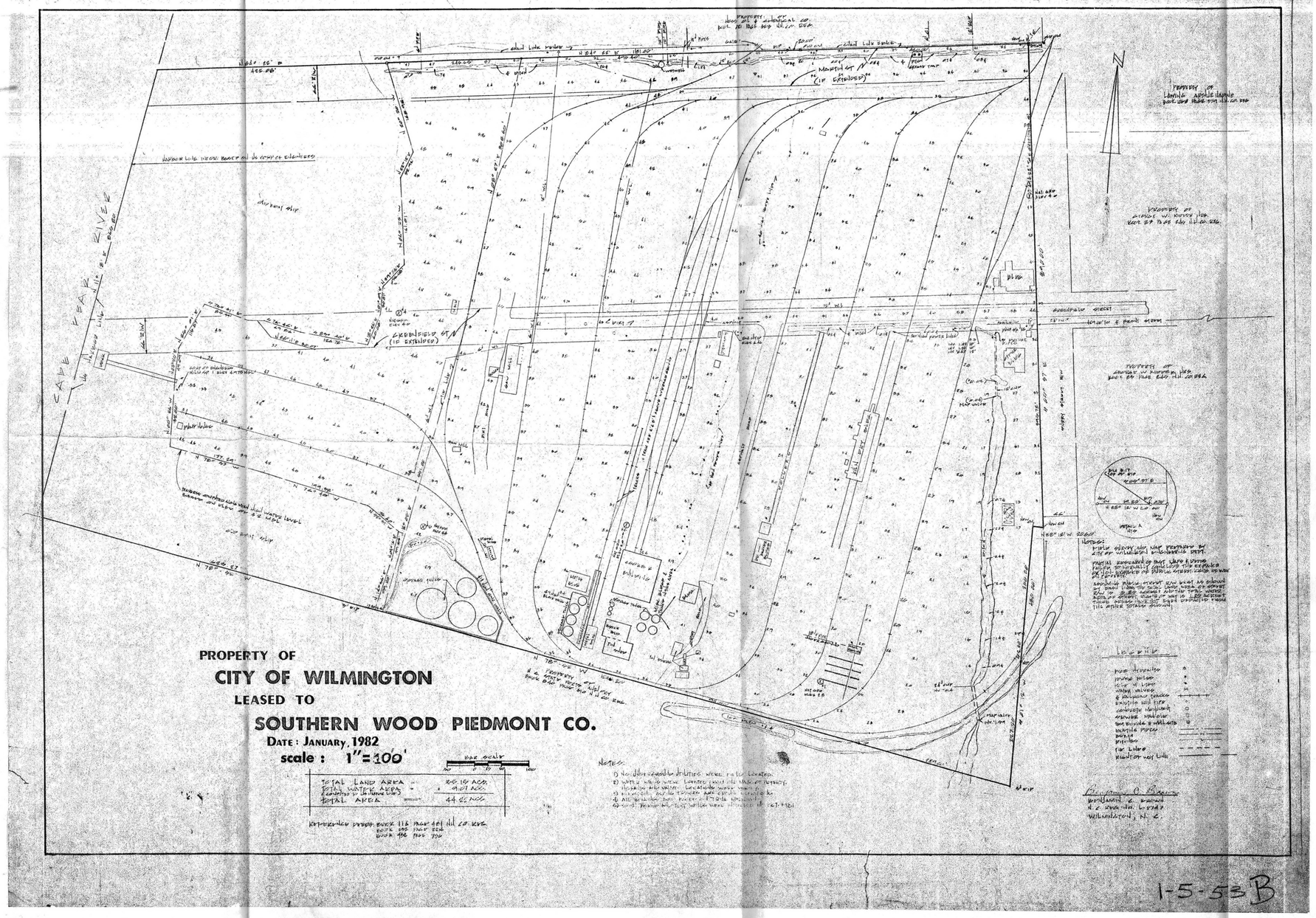
West Columbia, South Carolina 29169
Phone: 803-796-6240
Fax: 803-796-6250

REVISIONS			CADD NO.
			RIPROP
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 2
DESIGN BY GBK	DATE 9/10/98	PROJECT NO. 979007.A	SHEET NO.



JANUARY 1982 FORMER
CITY OF WILMINGTON PLAT
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

Schnabel Engineering

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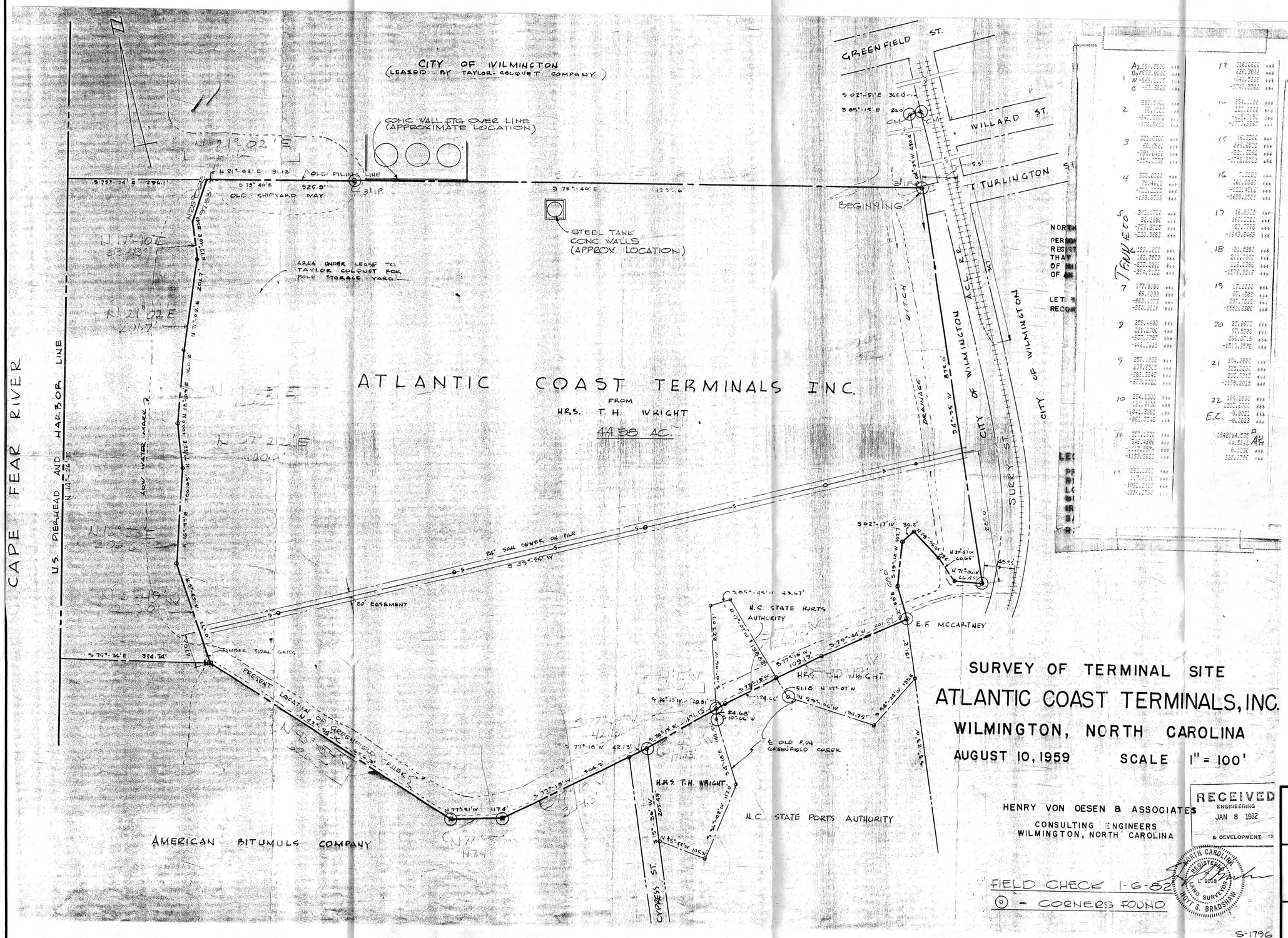
West Columbia, South Carolina 29169
Phone: 803-796-6240
Fax: 803-796-6250

REVISIONS		
DRAWN BY CAB	DATE 9/10/98	CADD NO. PROPMAP
DESIGN BY GBK	SCALE AS SHOWN	FIGURE NO. 3
CHECKED BY	PROJECT NO. 979007.A	SHEET NO.



JANUARY 1982 FORMER
ATLANTIC COAST TERMINAL PLAT
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

Schnabel Engineering

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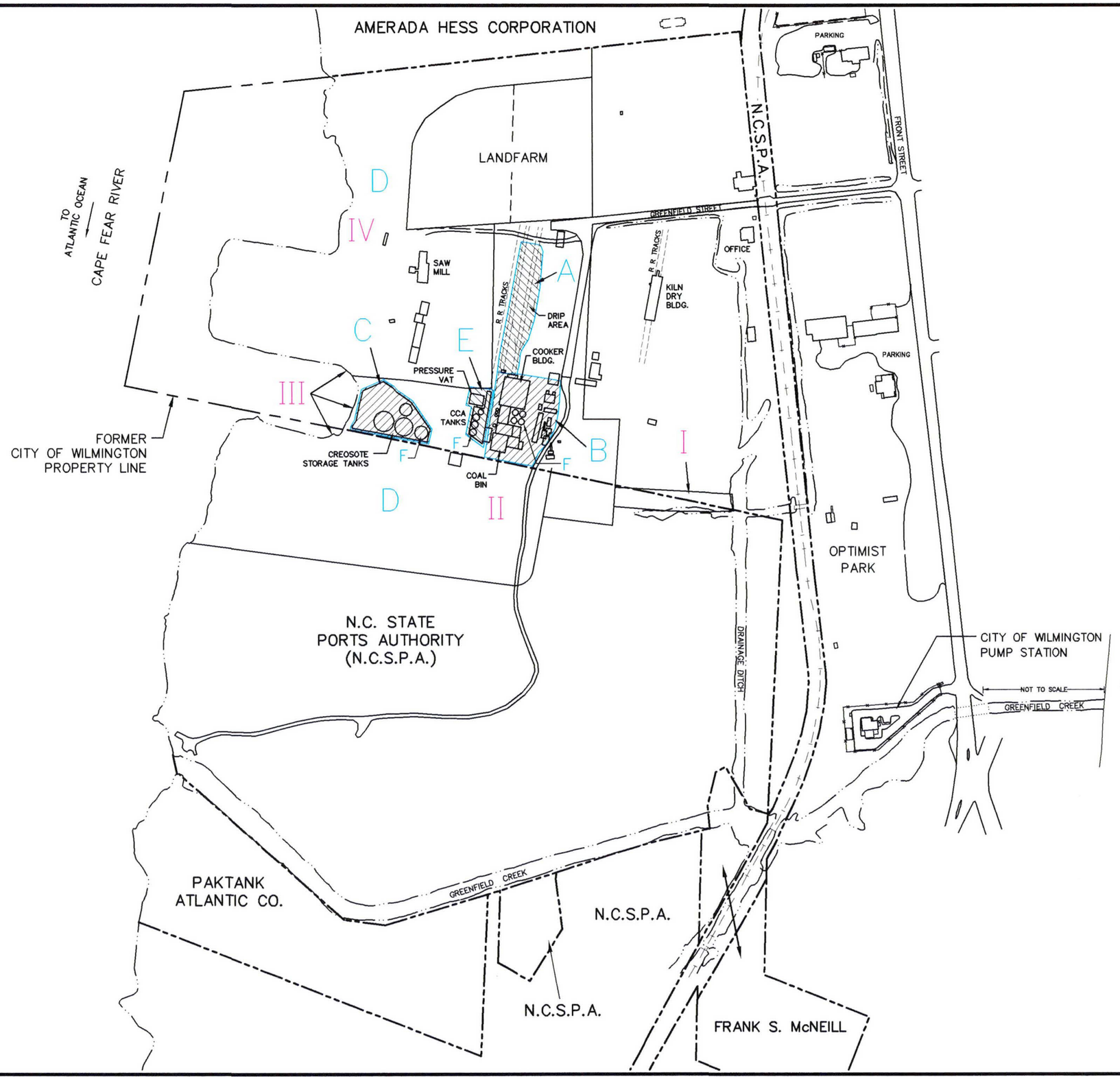
Phone: 803-796-6240
Fax: 803-796-6250

REVISIONS		
DRAWN BY CAB	DATE 9/10/98	CADD NO. ACTMAP
DESIGN BY GBK	SCALE AS SHOWN	FIGURE NO. 4
CHECKED BY	PROJECT NO. 979007.A	SHEET NO.



OPERATING DEPOSITS

A CREOSOTE/PENTACHLOROPHENOL TRACK AREA
B CREOSOTE/PENTACHLOROPHENOL TREATING AREA
C BULK STORAGE AREA
D TREATED WOOD STORAGE AREAS
E C.C.A. TREATING AREA
F STORAGE TANK SLUDGE

SUPERFUND AREAS

I COVERED DITCH
II TRASH DUMP
III DIKE AREA
IV TRASH FILL AREA

GRAPHIC SCALE

0 150 300

1 inch = 300 ft.

SUPERFUND AND OPERATING DEPOSIT
LOCATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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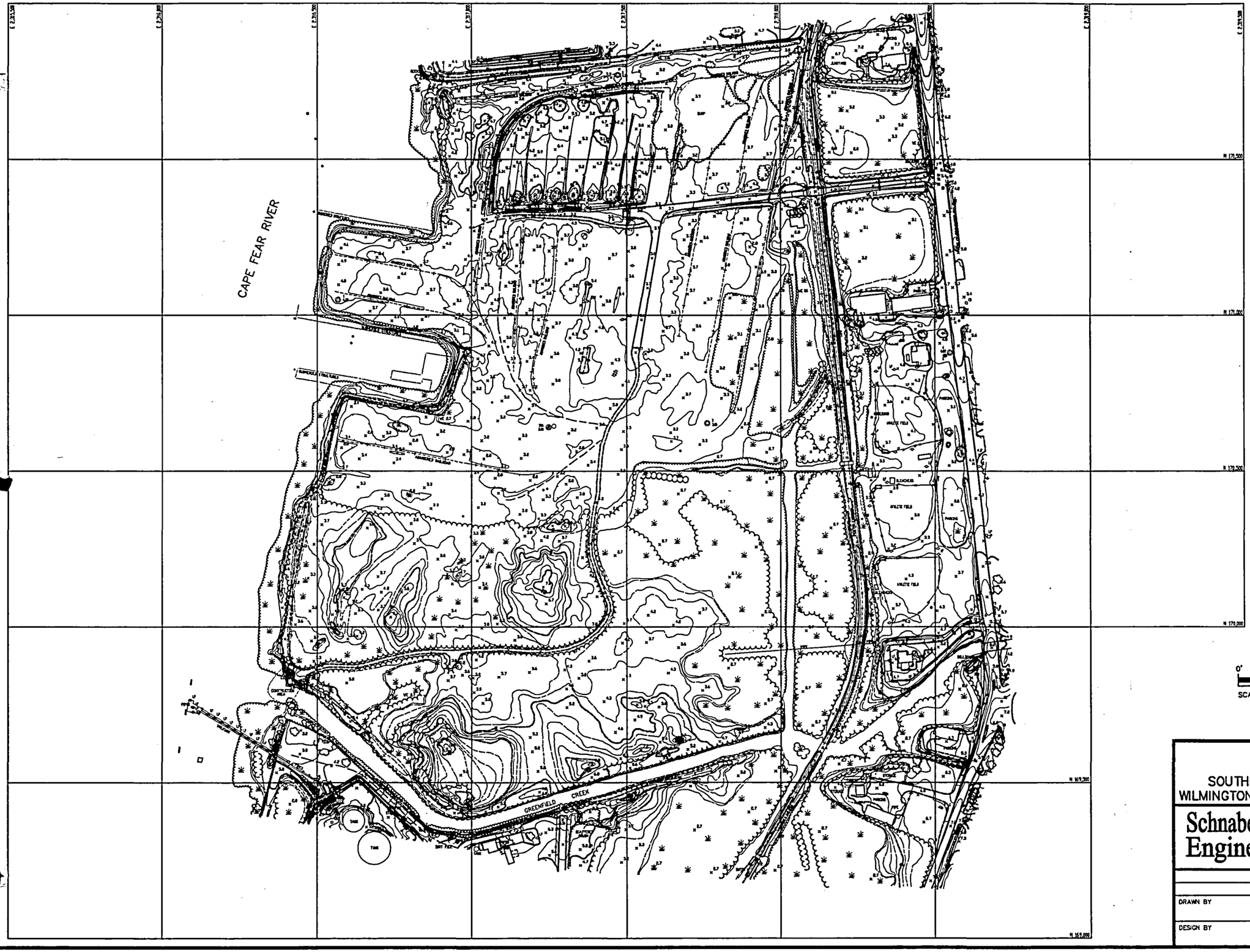
REVISIONS			CADD NO.
			RISUPER
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 5
DESIGN BY GBK	DATE 9/15/98	PROJECT NO. 979007.A	SHEET NO.



PS1 PHOTOGRAMMETRIC SERVICES, INC.
6455 E. LIVINGSTON AVENUE
REYNOLDSBURG, OHIO 43068

0' 150' 300' 600'

SCALE: 1"=300' CONTOUR INTERVAL: 1/2'

DATE OF PHOTOGRAPHY: 24-FEB-93

SITE TOPOGRAPHIC MAP

SOUTHERN WOOD PIEDMONT COMAPNY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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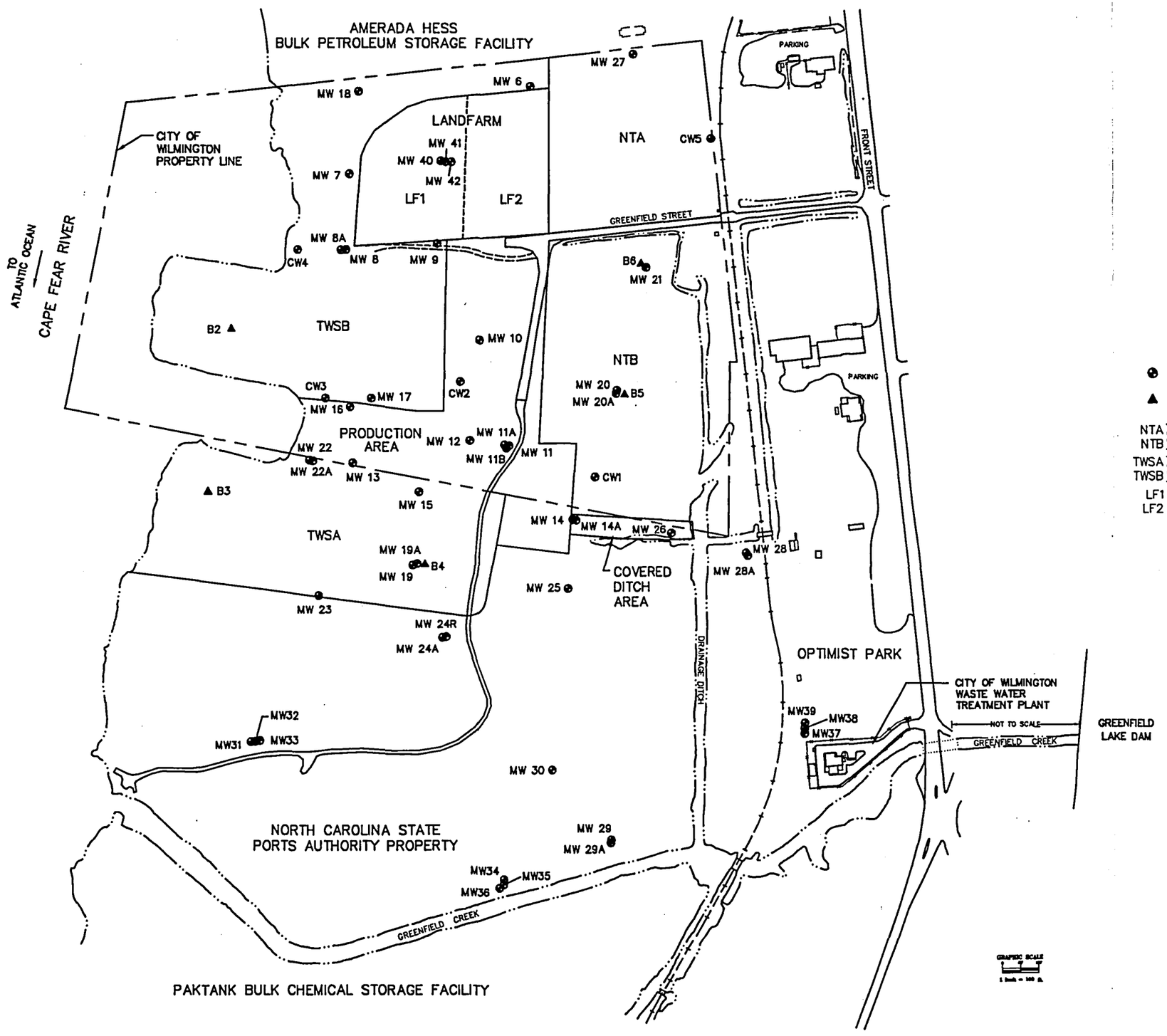
REVISIONS			CADD NO. 979TOPO
DRAWN BY	CHECKED BY GBK	SCALE .1"=300'	FIGURE NO. 6
DESIGN BY	DATE 9/11/98	PROJECT NO. 979007.A	SHEET NO.



LEGEND

- GROUNDWATER MONITORING WELLS (52)
- ABANDONED TEMPORARY MONITORING WELLS (5)
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

GRAPHIC SCALE

0 150 300

1 inch = 300 ft.

GROUNDWATER
MONITORING WELL LOCATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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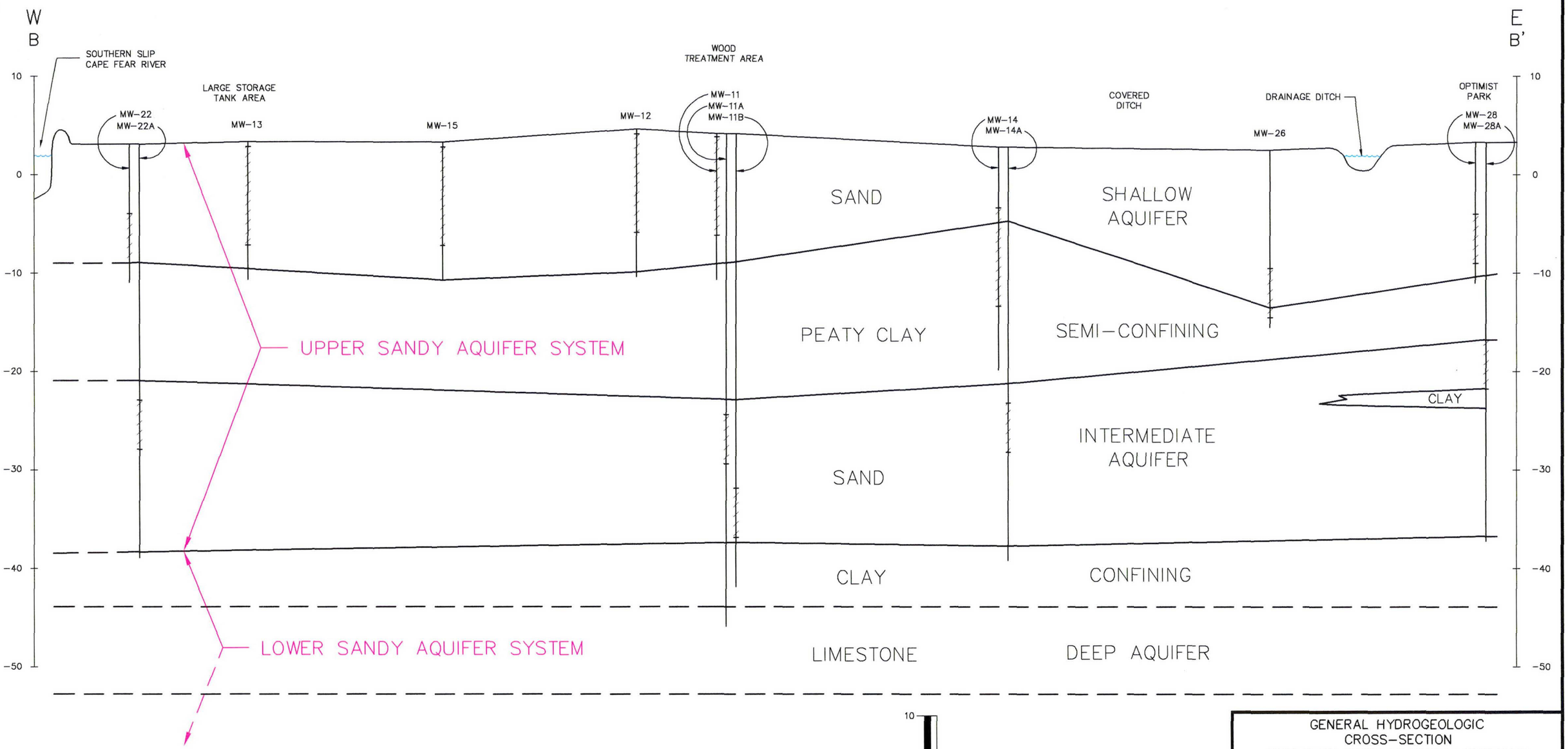
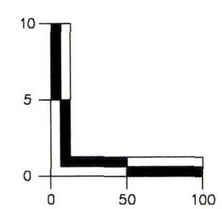
REVISIONS			CADD NO. RIGWTALL
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 7
DESIGN BY GBK	DATE 9/22/98	PROJECT NO. 979007.A	SHEET NO.



LEGEND

SCREEN



SCALE

HORIZONTAL: 1" = 100'

VERTICAL: 1" = 10'

GENERAL HYDROGEOLOGIC
CROSS-SECTION
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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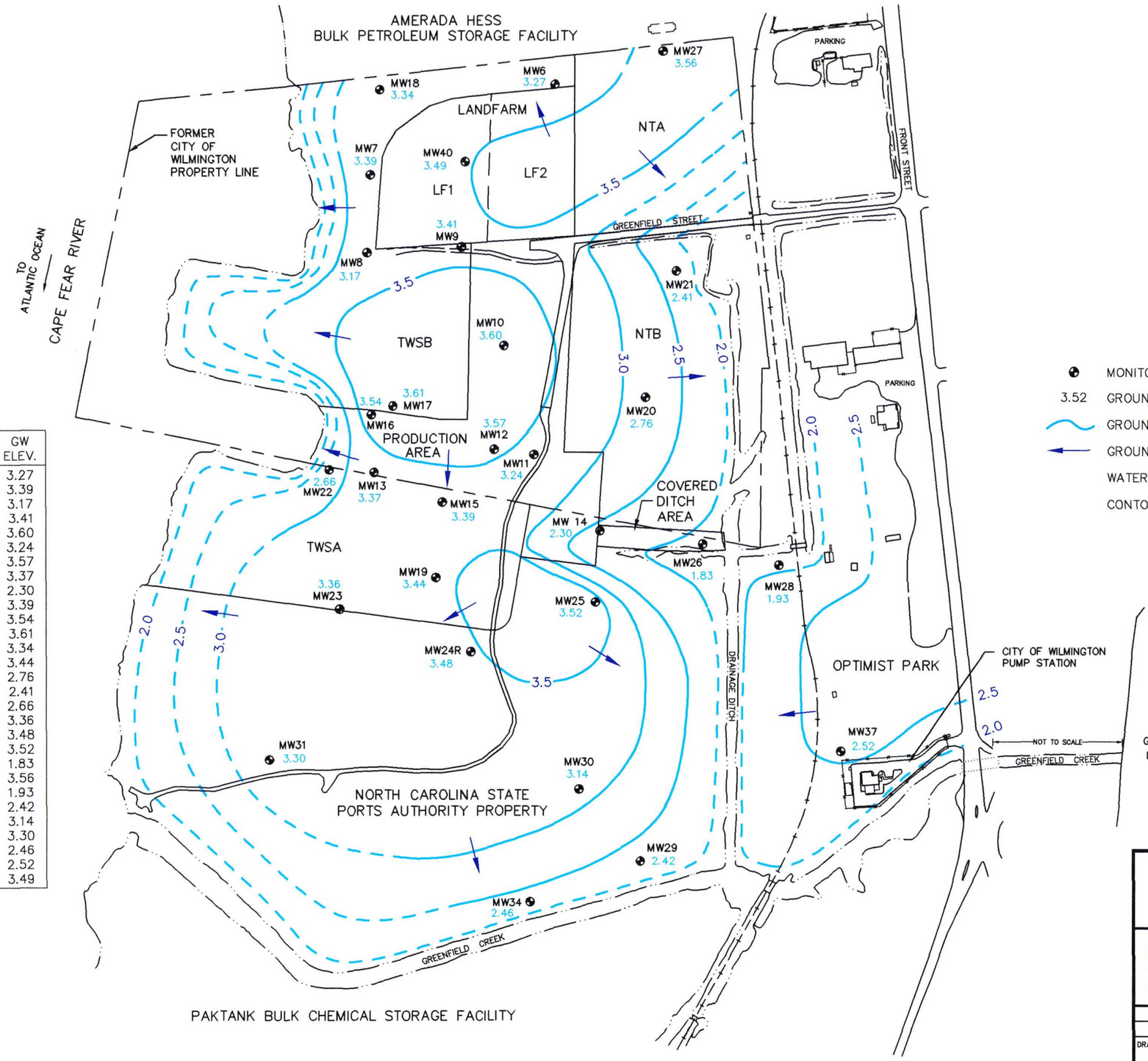
REVISIONS			CADD NO.
			RIGEOXS
DRAWN BY CAB	CHECKED BY GBK	SCALE AS SHOWN	FIGURE NO. 8
DESIGN BY GBK	DATE 6/30/98	PROJECT NO. 979007.A	SHEET NO.



WELL NO.	DATE SAMPLED	TOC ELEV.	DEPTH TO GW	GW ELEV.
MW6	2/25/98	5.07	1.8	3.27
MW7	2/25/98	6.03	2.64	3.39
MW8	2/25/98	6.80	3.63	3.17
MW9	2/25/98	6.43	3.02	3.41
MW10	2/25/98	7.41	3.81	3.60
MW11	2/25/98	8.02	4.78	3.24
MW12	2/25/98	8.22	4.65	3.57
MW13	2/25/98	6.97	3.6	3.37
MW14	2/25/98	6.30	4.0	2.30
MW15	2/25/98	7.07	3.68	3.39
MW16	2/25/98	7.69	4.15	3.54
MW17	2/25/98	7.65	4.04	3.61
MW18	2/25/98	6.61	3.27	3.34
MW19	2/25/98	5.44	2.0	3.44
MW20	2/25/98	5.44	2.68	2.76
MW21	2/25/98	5.34	2.93	2.41
MW22	2/25/98	5.26	2.6	2.66
MW23	2/25/98	4.96	1.6	3.36
MW24R	2/25/98	5.98	2.5	3.48
MW25	2/25/98	4.96	1.44	3.52
MW26	2/25/98	4.91	3.08	1.83
MW27	2/25/98	5.41	1.85	3.56
MW28	2/25/98	5.18	3.25	1.93
MW29	2/25/98	5.32	2.9	2.42
MW30	2/25/98	6.26	3.12	3.14
MW31	2/25/98	6.63	3.33	3.30
MW34	2/25/98	8.13	5.67	2.46
MW37	2/25/98	5.97	3.45	2.52
MW40	2/25/98	8.20	4.71	3.49

LEGEND

- MONITORING WELLS (29)
- 3.52 GROUNDWATER ELEVATION
- GROUNDWATER ISOELEVATION LINE
- GROUNDWATER FLOW DIRECTION

WATER LEVEL DATA COLLECTED ON FEB. 25, 1998

CONTOUR INTERVAL = 0.5 FT.

GRAPHIC SCALE

0 150' 300'

1 inch = 300 ft.

SHALLOW AQUIFER POTENTIOMETRIC MAP

SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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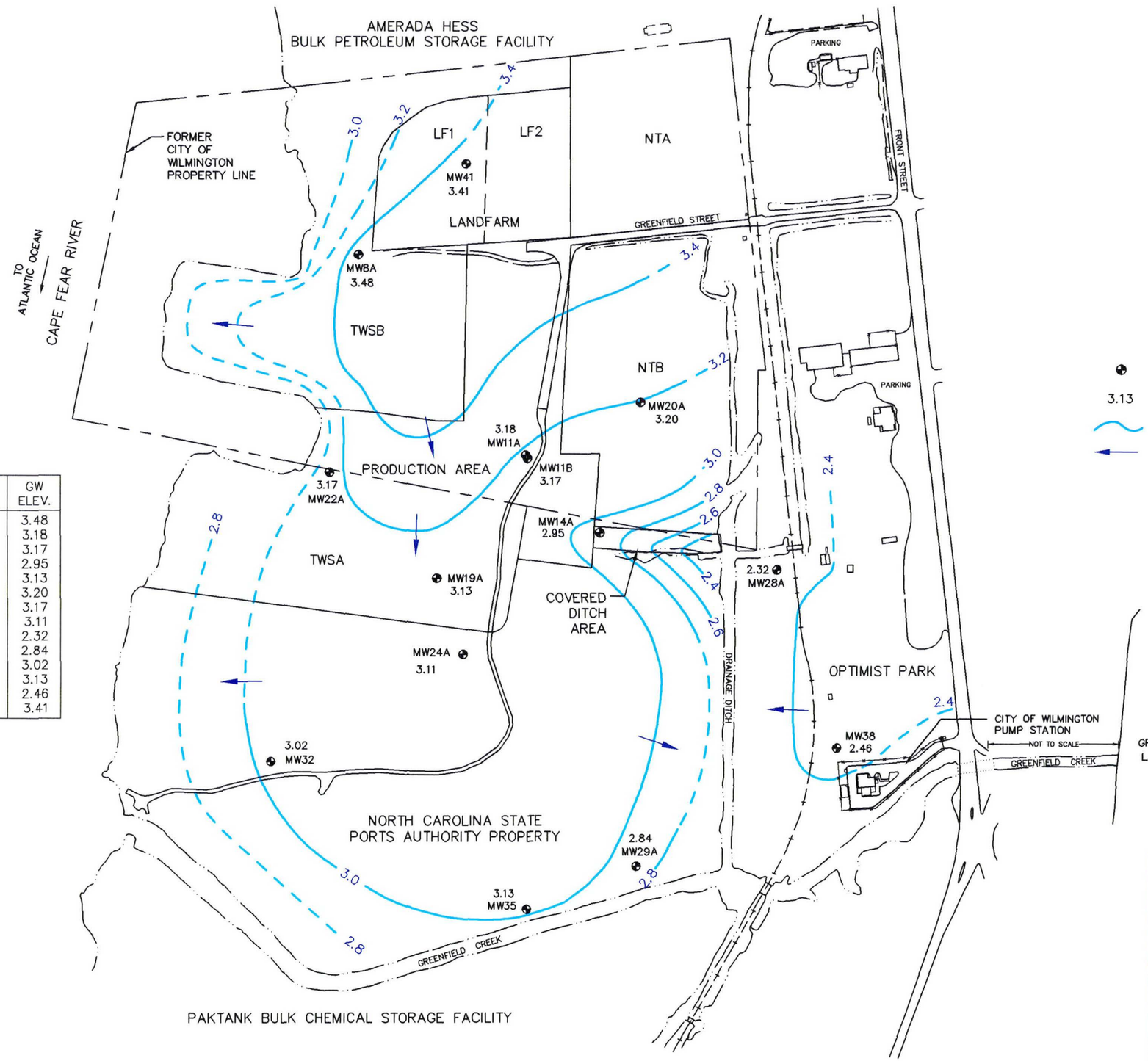
REVISIONS			CADD NO.
			RIUPAQS
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 9
DESIGN BY MLM	DATE 6/18/98	PROJECT NO. 979007.A	SHEET NO.



WELL NO.	DATE SAMPLED	TOC ELEV.	DEPTH TO GW	GW ELEV.
MW8A	2/25/98	6.43	2.95	3.48
MW11A	2/25/98	6.38	3.2	3.18
MW11B	2/25/98	6.26	3.09	3.17
MW14A	2/25/98	5.05	2.1	2.95
MW19A	2/25/98	5.25	2.12	3.13
MW20A	2/25/98	5.23	2.03	3.20
MW22A	2/25/98	5.32	2.15	3.17
MW24A	2/25/98	5.81	2.7	3.11
MW28A	2/25/98	5.47	3.15	2.32
MW29A	2/25/98	5.14	2.3	2.84
MW32	2/25/98	6.22	3.2	3.02
MW35	2/25/98	7.71	4.58	3.13
MW38	2/25/98	5.91	3.45	2.46
MW41	2/25/98	7.66	4.25	3.41

LEGEND

- MONITORING WELLS (14)
- 3.13 GROUNDWATER ELEVATION
- GROUNDWATER ISOELEVATION LINE
- GROUNDWATER FLOW DIRECTION

WATER LEVEL DATA COLLECTED ON FEB. 25, 1998

CONTOUR INTERVAL = 0.2 FT.

GRAPHIC SCALE

0 150' 300'

1 inch = 300 ft.

INTERMEDIATE AQUIFER POTENTIOMETRIC MAP

SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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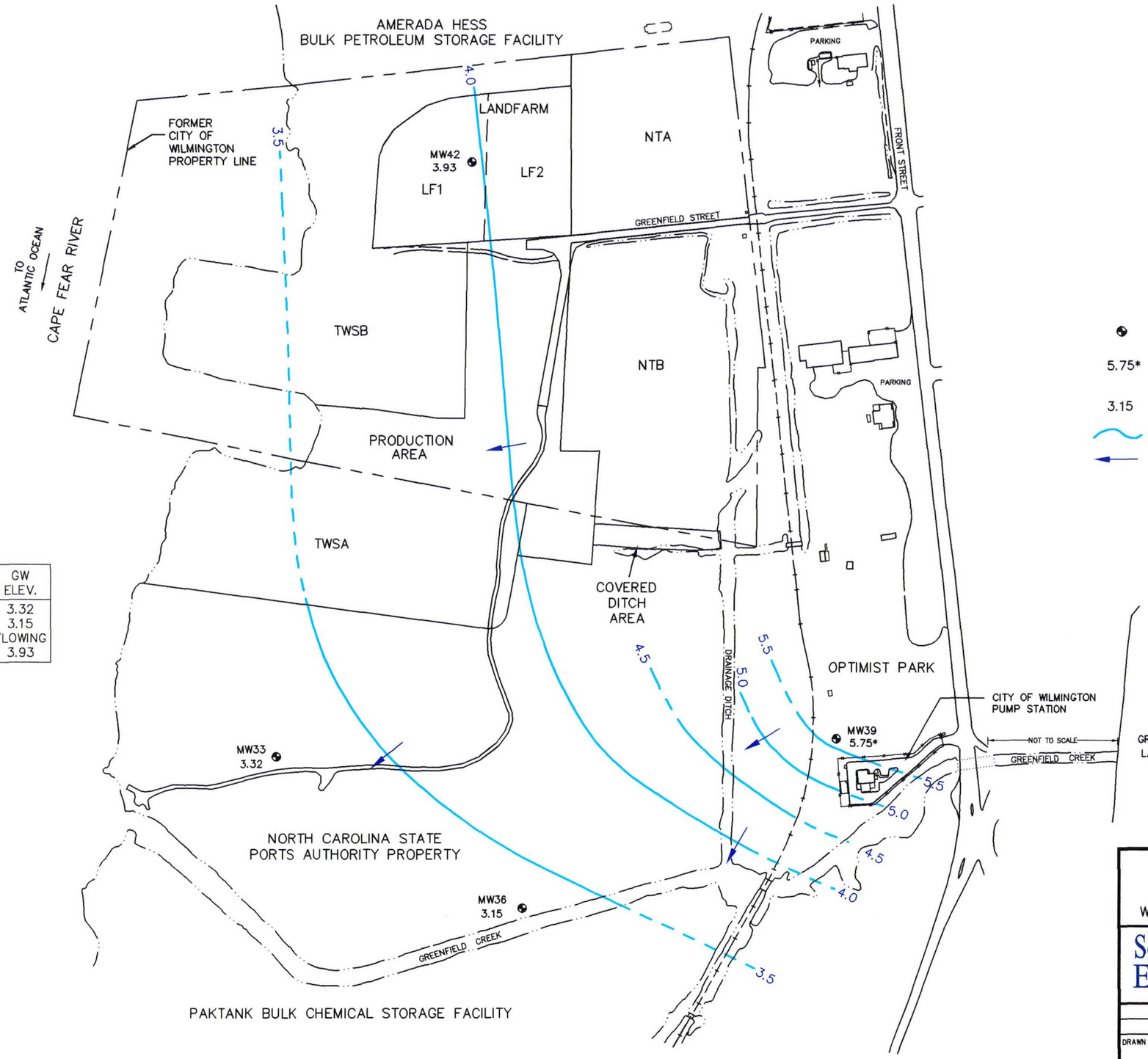
REVISIONS			CADD NO.
			RIUPAQI
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 10
DESIGN BY MLM	DATE 6/18/98	PROJECT NO. 979007.A	SHEET NO.



WELL NO.	DATE SAMPLED	TOC ELEV.	DEPTH TO GW	GW ELEV.
MW33	2/25/98	5.92	2.60	3.32
MW36	2/25/98	7.93	4.78	3.15
MW39	2/25/98	5.75	–	FLOWING
MW42	2/25/98	7.68	3.75	3.93

LEGEND

- MONITORING WELLS (4)
- 5.75* GROUNDWATER FLOWING OVER TOP OF CASING
  TOP OF CASING ELEVATION = 5.75 FT.
- 3.15 GROUNDWATER ELEVATION
- GROUNDWATER ISOELEVATION LINE
- GROUNDWATER FLOW DIRECTION

WATER LEVEL DATA COLLECTED FEB. 25, 1998

CONTOUR INTERVAL = 0.5 FT.

GRAPHIC SCALE

0 150' 300'

1 inch = 300 ft.

DEEP AQUIFER POTENTIOMETRIC MAP

SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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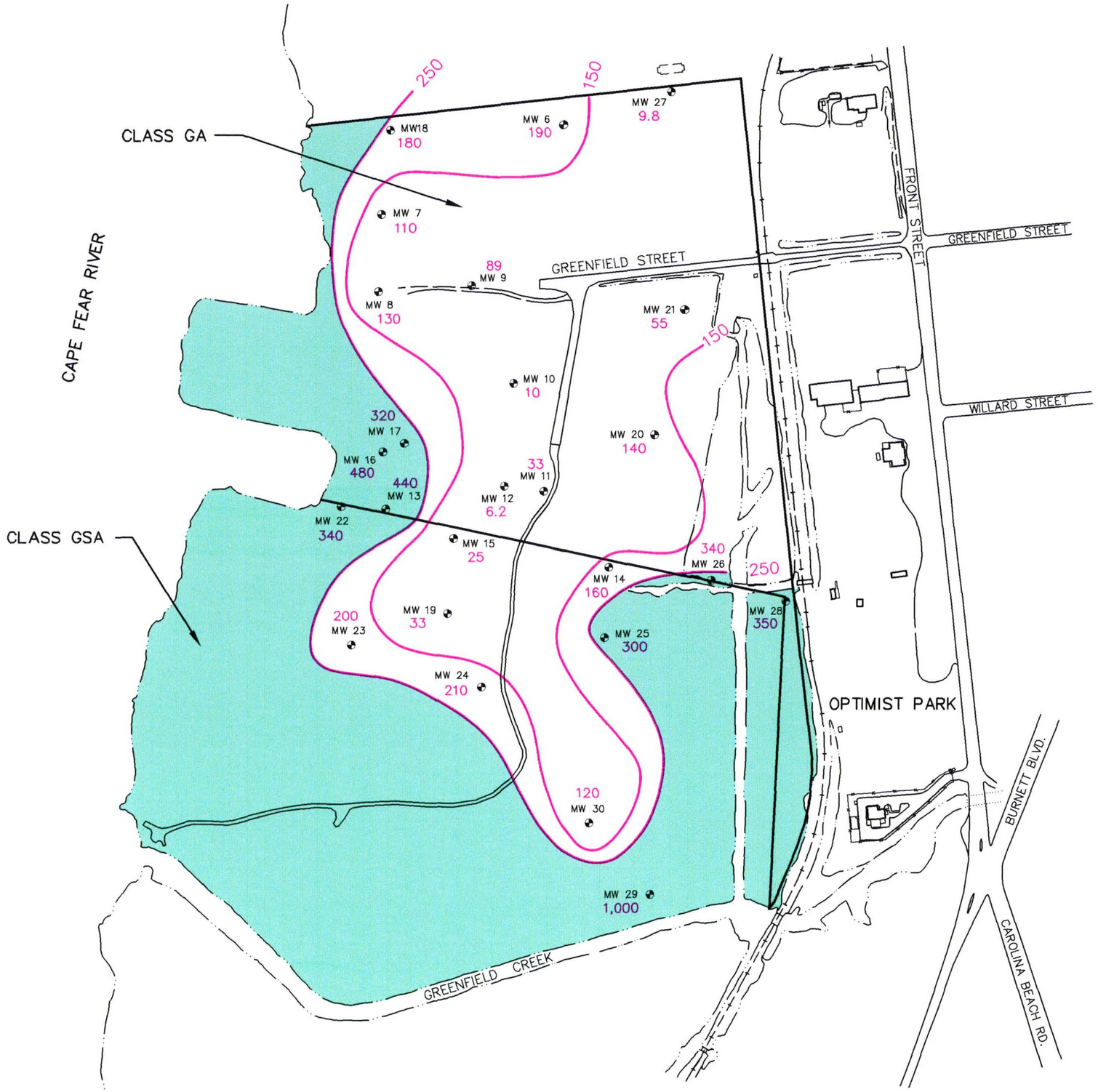
REVISIONS			CADD NO.
			RILOWAQD
DRAWN BY: CAB	CHECKED BY: GBK	SCALE: 1"=300'	FIGURE NO. 11
DESIGN BY: MLM	DATE: 6/18/98	PROJECT NO. 979007.A	SHEET NO.



SHALLOW AQUIFER	
WELL #	CHLORIDE (mg/l)
MW 6	190
MW 7	110
MW 8	130
MW 9	86
MW 10	10
MW 11	33
MW 12	6.2
MW 13	440
MW 14	160
MW 15	25
MW 16	480
MW 17	320
MW 18	180
MW 19	33
MW 20	140
MW 21	55
MW 22	340
MW 23	200
MW 24	210
MW 25	300
MW 26	340
MW 27	9.8
MW 28	350
MW 29	1,000
MW 30	120

INTERMEDIATE AQUIFER	
WELL #	CHLORIDE (mg/l)
MW 8A	36
MW 11A	8.1
MW 11B	11
MW 14A	21
MW 19A	33
MW 20A	15
MW 22A	31
MW 24A	37
MW 28A	13
MW 29A	29

WELLS WITH CHLORIDE > 250 mg/l	
WELL #	CHLORIDE (mg/l)
MW 25	300
MW 17	320
MW 22	340
MW 26	340
MW 28	350
MW 13	440
MW 16	480
MW 29	1,000

LEGEND

- PERMANENT MONITORING WELLS
- CHLORIDE ISOCONCENTRATION LINE
- 700 CHLORIDE CONCENTRATION mg/L
- SALINE GROUNDWATER

GROUNDWATER WATER SAMPLES COLLECTED MAY 13–14, 1996.

GRAPHIC SCALE
0 150 300
1 inch = 300 ft.

SHALLOW AQUIFER
CHLORIDE ISOCONCENTRATION MAP
SOUTHERN WOOD PIEDMONT
WILMINGTON, NORTH CAROLINA FACILITY

Schnabel Engineering
Schnabel Engineering Associates, Inc.
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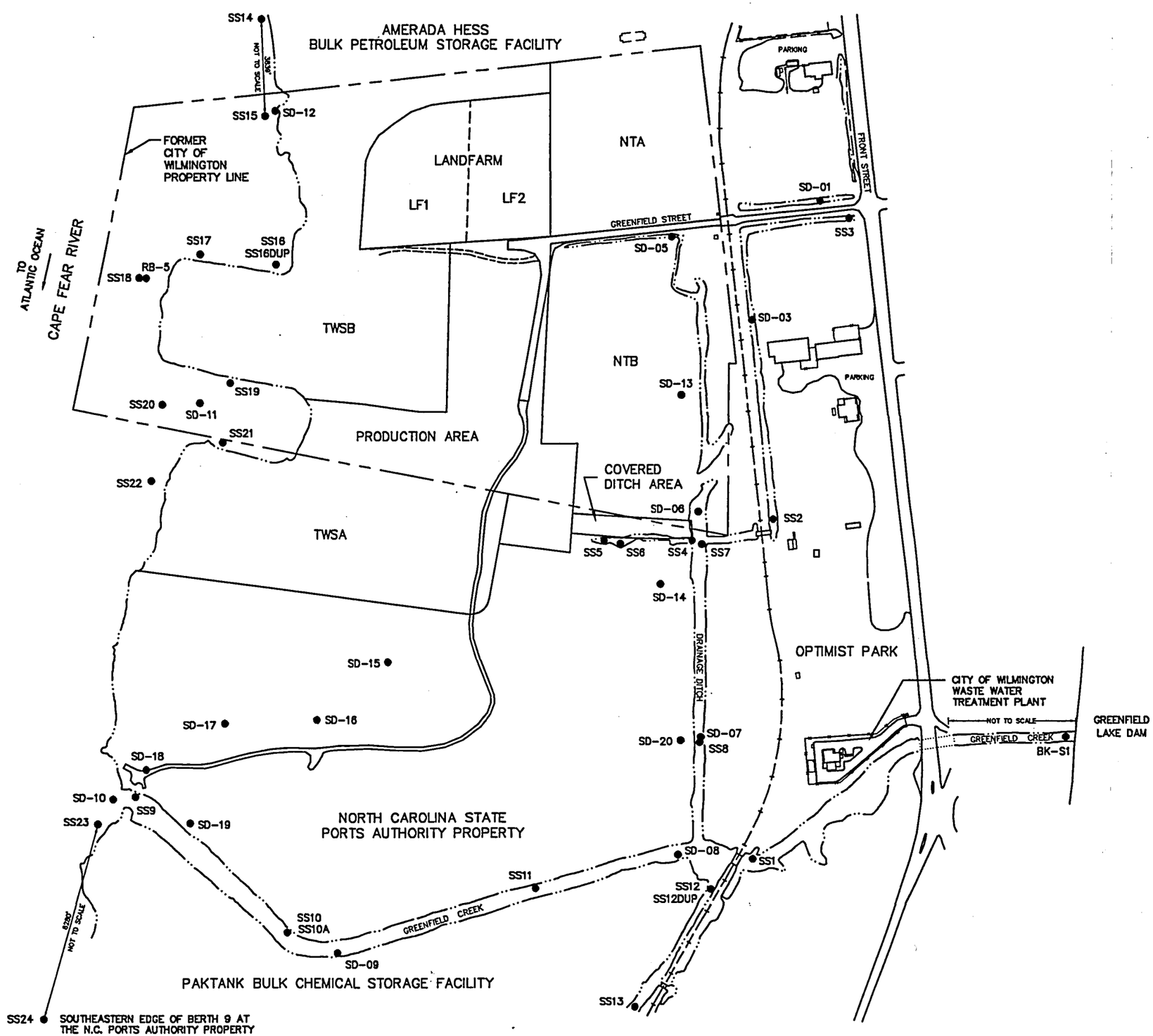
West Columbia, South Carolina 29169
Phone: 803-796-6240
Fax: 803-796-6250

REVISIONS			CADD NO.
			979CHLOR
DRAWN BY: CAB	CHECKED BY: GBK	SCALE: 1"=300'	FIGURE NO. 12
DESIGN BY: GBK	DATE: 9/15/98	PROJECT NO. 979007.A	SHEET NO.



LEGEND

- ● SEDIMENT SOIL SAMPLES (47)
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

GRAPHIC SCALE

0 150 300

1 inch = 300 ft.

SEDIMENT
SAMPLE LOCATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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West Columbia, South Carolina 29169
Phone: 803-796-6240
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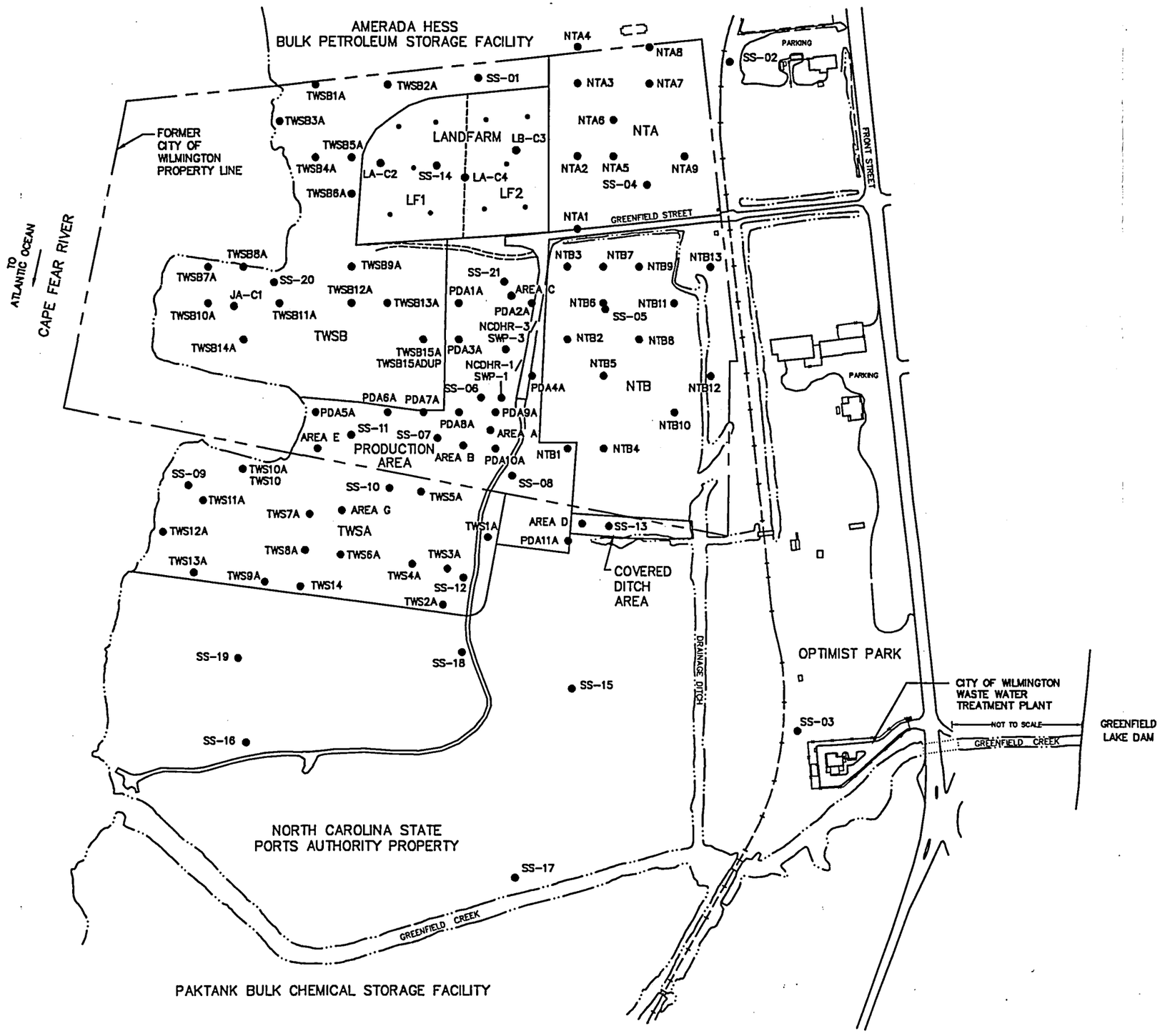
REVISIONS			CADD NO.
			RISEDALL
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 13
DESIGN BY GBK	DATE 9/22/98	PROJECT NO. 979007.A	SHEET NO.



LEGEND

- ● SURFACE SOIL SAMPLES (92)
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

GRAPHIC SCALE

0 150 300

1 inch = 300 ft.

SURFACE SOIL
SAMPLE LOCATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

Schnabel Engineering

Schnabel Engineering Associates, Inc.
104 Corporate Blvd., Suite 410
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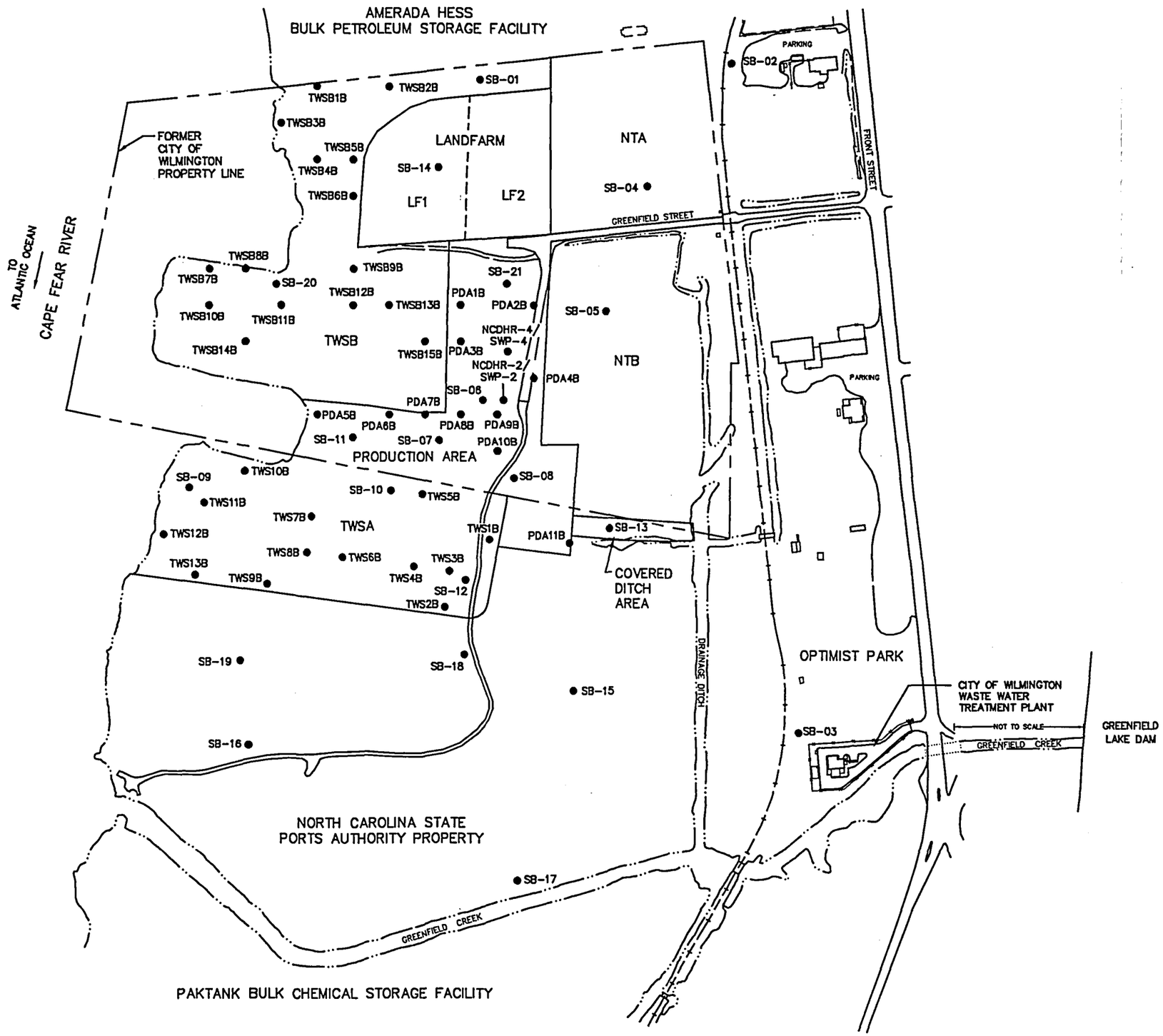
Phone: 803-796-6240
Fax: 803-796-6250

REVISIONS			CADD NO.
			RISURSOIL
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 14
DESIGN BY GBK	DATE 9/22/98	PROJECT NO. 979007.A	SHEET NO.



LEGEND

- ● SUBSURFACE SOIL SAMPLES (65).
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

GRAPHIC SCALE

0 150 300

1 inch = 300 ft.

SUBSURFACE SOIL
SAMPLE LOCATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

Schnabel Engineering
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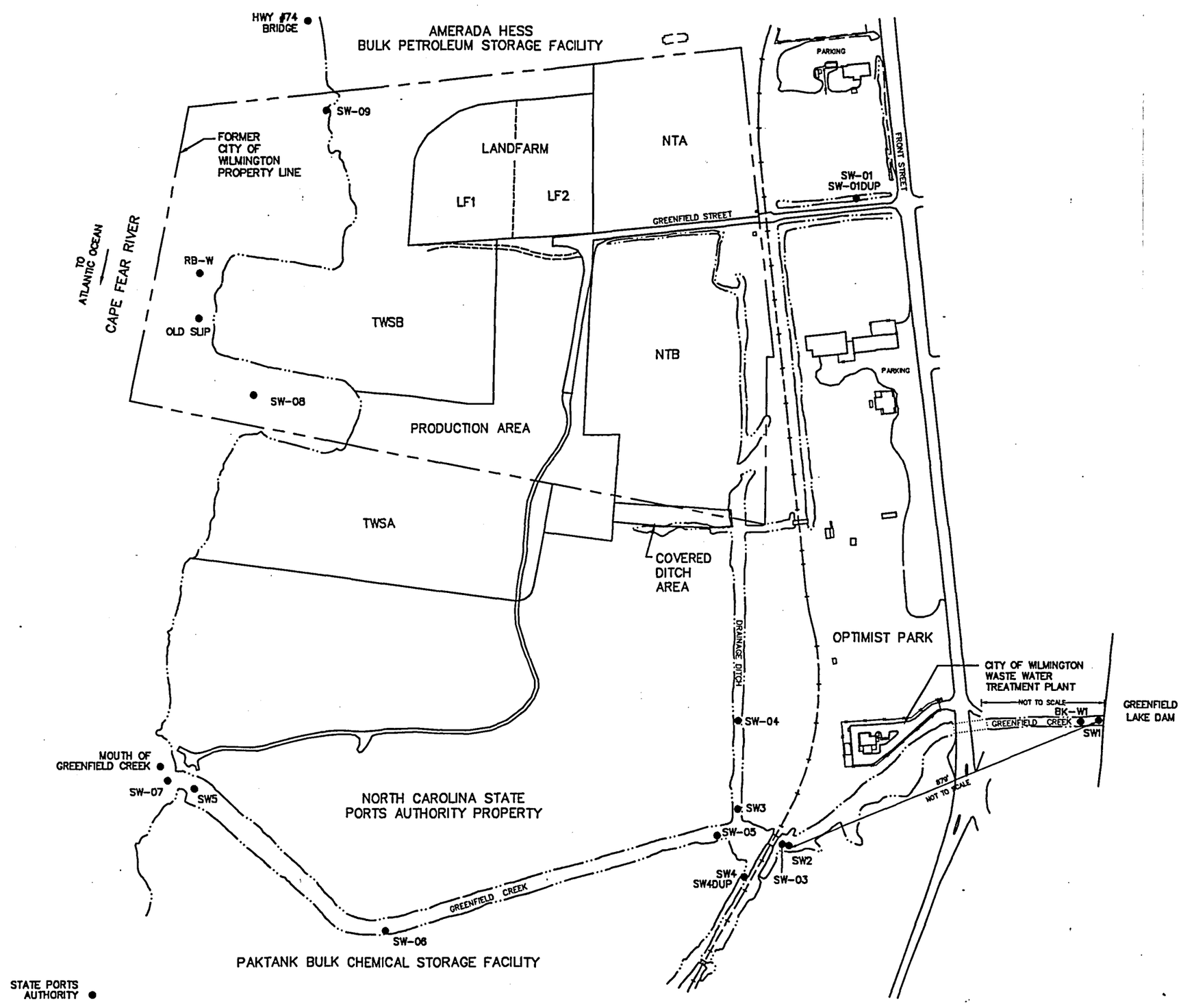
REVISIONS			CADD NO.
			RISUBALL
DRAWN BY: CAB	CHECKED BY: GBK	SCALE: 1"=300'	FIGURE NO. 15
DESIGN BY: GBK	DATE: 9/22/98	PROJECT NO. 979007.A	SHEET NO.



LEGEND

- ● SURFACE WATER SAMPLES (21)
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

GRAPHIC SCALE

0 150 300

1 inch = 300 ft.

SURFACE WATER
SAMPLE LOCATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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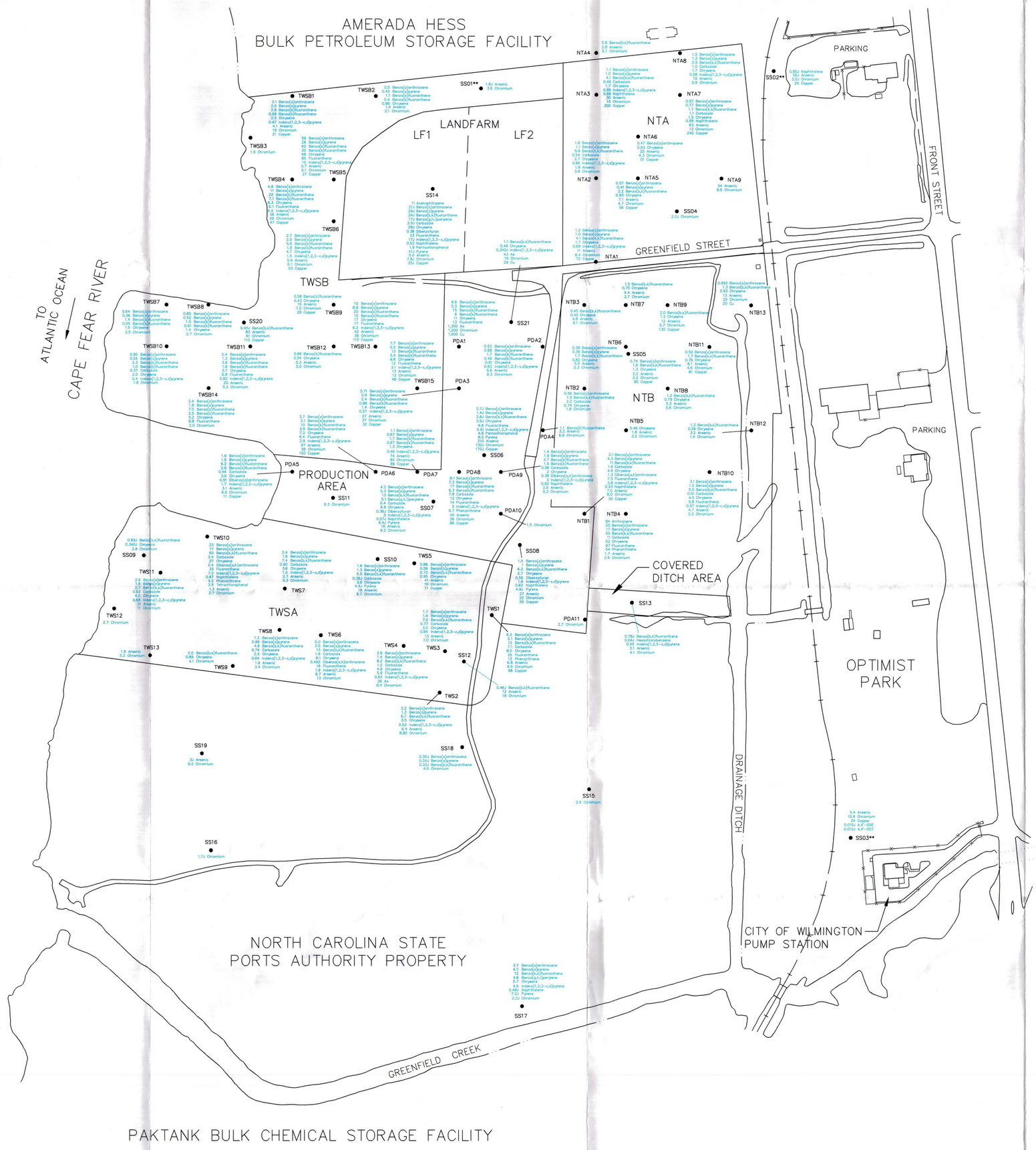
REVISIONS			CADD NO.
			RISWTALL
DRAWN BY: CAB	CHECKED BY: GBK	SCALE: 1"=300'	FIGURE NO. 16
DESIGN BY: GBK	DATE: 9/22/98	PROJECT NO. 979007.A	SHEET NO.



NOTE: ONLY CONSTITUENTS THAT EXCEED THE PRELIMINARY SOIL REMEDIATION GOALS ARE SHOWN ON MAP.

Preliminary Soil Remediation Goals[1]				
GROUP	CONSTITUENT	HBRG[2]	PGRG[3]	MDL[4]
METALS	Arsenic	4.6	1	–
	Chromium	78	1	–
	Copper	620	20	–
SEMI-VOLATILES	2-Chlorophenol	78	0.002	0.33
	2,4-Dimethylphenol[5]	320	1.46	–
	2-Methylnaphthalene	460	0.56	–
	Acenaphthene	940	1.6	–
	Acenaphthylene	460	4.2	–
	Anthracene	4600	42	–
	Benzo(a)anthracene	0.88	0.000958	0.33
	Benzo(a)pyrene	0.088	0.004	0.33
	Benzo(b)fluoranthene[6]	0.88	0.00094	0.33
	Benzo(k)fluoranthene[6]	8.8	0.0094	0.33
	Benzo(g,h,i)perylene	460	4.2	–
	Bis(2-ethylhexyl)phthalate	46	3	–
	Carbazole	0.088	0.2	0.33
	Chrysene	88	0.0958	0.33
	Dibenz(a,h)anthracene	0.088	0.000094	0.33
	Dibenzofuran	62	0.3	0.33
	Di-n-butyl phthalate	1560	14	–
	Fluoranthene	620	5.6	–
	Fluorene	620	5.6	–
	Hexachlorobenzene	0.4	0.0004	–
	Indeno(1,2,3-cd)pyrene	0.88	0.00094	0.33
	Naphthalene	620	0.42	–
	Pentachlorophenol	5.3	0.006	1.7
	Phenanthrene	460	4.2	–
	Pyrene	460	4.2	–
	Tetrachlorophenols	460	0.11	1.7
VOLATILES	Xylene	32,000	10.6	–
PESTICIDES	4,4'-DDE	1.9	0.002	0.0039
	4,4'-DDT	1.9	0.002	0.0039

NOTE: All results are in mg/kg. Only detected constituents are listed.

1. Taken from the June 1998 Registered Environmental Consultant Program Implementation Guidance (RECIG) Appendix D. Both HBRG & PGRG must be obtained.
2. HEALTH BASED REMEDIATION GOAL (HBRG). Listed in Table D-1 of RECIG. If not listed in Table D-1, constituents can be screened using the HBRG of 0.088 mg/kg for Benzo(a)pyrene (carcinogens) and 460 mg/kg for pyrene (non-carcinogens). Cleanup to below method detection limit (MDL) is not required.
3. PROTECTION OF GROUNDWATER REMEDIATION GOAL (PGRG). NCDENR recommends the use of TCLP analysis to determine the leachability of contaminants. Because no TCLP analysis has been performed, the PGRG is set at twenty-times the corresponding groundwater remediation goal. Cleanup to below method detection limit is not required.
4. METHOD DETECTION LIMIT (MDL). If the HBRG or the PGRG is less than the MDL, the MDL becomes the RG. The MDL is only listed when the MDL is greater than the HBRG or the PGRG.
5. No groundwater RG has been established. The USEPA Region III risk-based concentration was used to screen if further action is required. No further action is required.
6. Benzo(b)fluoranthene and Benzo(k)fluoranthene have individual RGs. These two constituents were combined and reported as Benzo(b,k)fluoranthene. Since Benzo(b)fluoranthene has a lower RG, it was conservatively assumed that the concentration of Benzo(b,k)fluoranthene was all Benzo(b)fluoranthene.

LEGEND

- ● SOIL SAMPLE LOCATIONS (82)
- 4.6 CONSTITUENT CONCENTRATION EXCEEDS REMEDIATION GOAL (mg/kg)
- ** BACKGROUND LOCATION
- J ESTIMATED VALUE
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

GRAPHIC SCALE
0 50' 100'
1 inch = 100 ft.

SURFACE SOIL
CONTAMINANT DELINEATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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Schnabel Engineering Associates, Inc.
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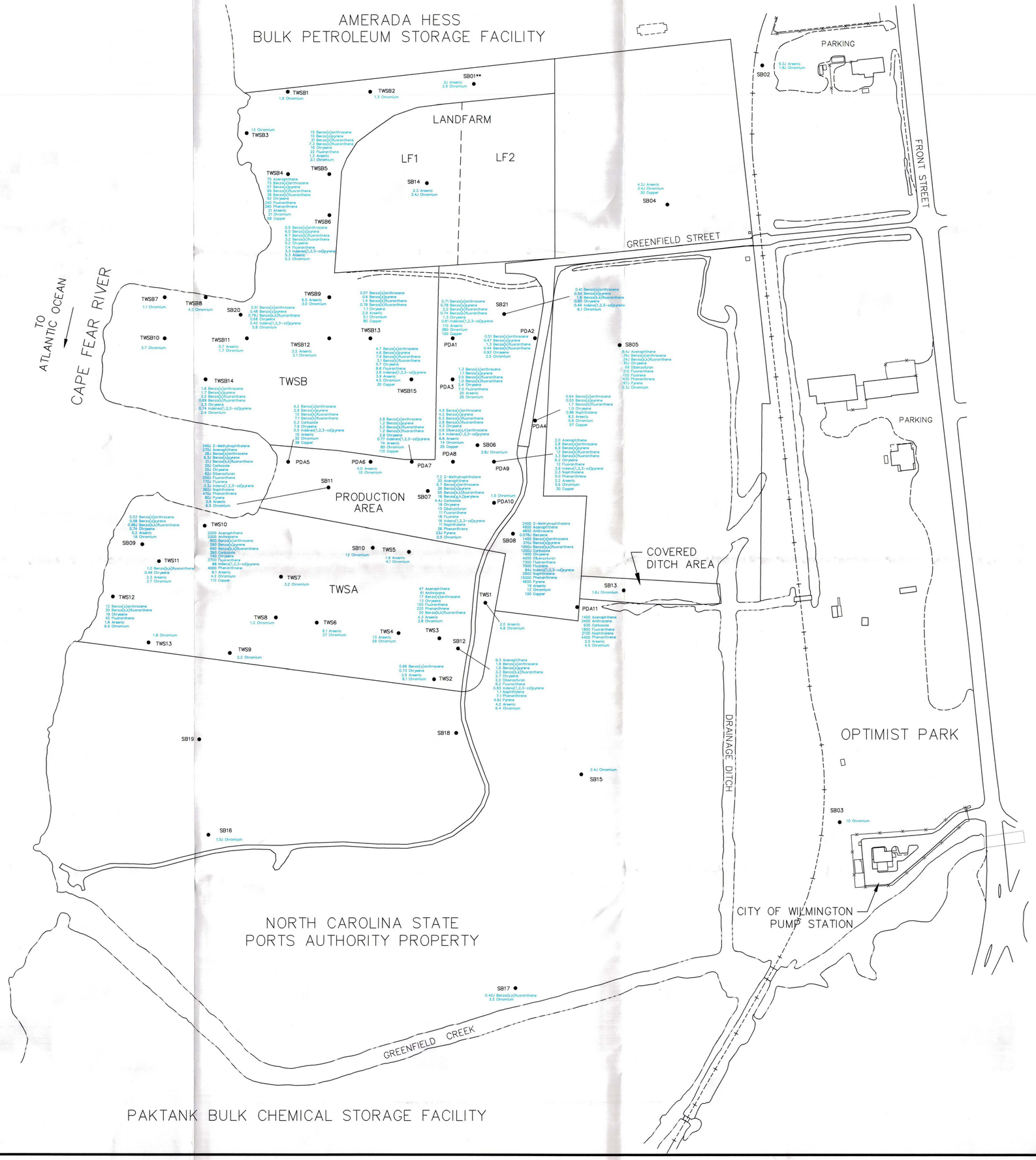
REVISIONS

DRAWN BY	DATE	CADD NO.
CAB	8/3/98	RISOILS
DESIGN BY	SCALE	FIGURE NO.
GBK	1"=100'	17
CHECKED BY	PROJECT NO.	SHEET NO.
GBK	979007.A	



NOTE: ONLY CONSTITUENTS THAT EXCEED THE PRELIMINARY SOIL REMEDIATION GOALS ARE SHOWN ON MAP.

Preliminary Soil Remediation Goals[1]

GROUP	CONSTITUENT	HBRG[2]	PGRG[3]	MDL[4]
METALS	Arsenic	4.6	1	–
	Chromium	78	1	–
	Copper	620	20	–
SEMI-VOLATILES	2-Chlorophenol	78	0.002	0.33
	2,4-Dimethylphenol	320	1.46[5]	–
	2-Methylnaphthalene	460	0.56	–
	Acenaphthene	940	1.6	–
	Acenaphthylene	460	4.2	–
	Anthracene	4600	42	–
	Benzo(a)anthracene	0.88	0.000958	0.33
	Benzo(a)pyrene	0.088	0.004	0.33
	Benzo(b)fluoranthene[6]	0.88	0.00094	0.33
	Benzo(k)fluoranthene[6]	8.8	0.0094	0.33
	Benzo(g,h,i)perylene	460	4.2	–
	Bis(2-ethylhexyl)phthalate	46	3	–
	Carbazole	0.088	0.2	0.33
	Chrysene	88	0.0958	0.33
	Dibenzo(a,h)anthracene	0.088	0.000094	0.33
	Dibenzofuran	62	0.3	0.33
	Di-n-butyl phthalate	1560	14	–
	Fluoranthene	620	5.6	–
	Fluorene	620	5.6	–
	Indeno(1,2,3-cd)pyrene	0.88	0.00094	0.33
	Naphthalene	620	0.42	–
	Pentachlorophenol	5.3	0.006	1.7
	Phenanthrene	460	4.2	–
	Pyrene	460	4.2	–
	Tetrachlorophenols	460	0.11	1.7
VOLATILES	Benzene	22	0.020	–
	Ethylbenzene	1560	0.580	–
	Hexachlorobenzene	0.4	0.0004	–
	Methyl Ethyl Ketone	9400	3.4	–
	Toluene	3200	20.0	–
	Xylene	32,000	10.6	–

NOTE: All results are in mg/kg. Only detected constituents are listed.

1. Taken from the June 1998 Registered Environmental Consultant Program Implementation Guidance (RECIG) Appendix D. Both HBRG & PGRG must be obtained.
2. HEALTH BASED REMEDIATION GOAL (HBRG). Listed in Table D-1 of RECIG. If not listed in Table D-1 then screened constituents using the HBRG of 0.088 mg/kg for Benzo(a)pyrene (carcinogens) and 460 mg/kg for pyrene (non-carcinogens). Cleanup to below method detection limit (MDL) is not required. Both HBRG & PGRG must be obtained.
3. PROTECTION OF GROUNDWATER REMEDIATION GOAL (PGRG). Twenty-times the corresponding groundwater remediation goal. Cleanup to below method detection limit is not required. Both HBRG and PGRG must be obtained.
4. METHOD DETECTION LIMIT (MDL). If the HBRG or the PGRG is less than the MDL, the MDL becomes the RG. The MDL is only listed when the MDL is greater than the HBRG or the PGRG.
5. No groundwater RG has been established. The USEPA Region III risk-based concentration was used to screen if further action is required. If the risk-based concentration is exceeded a RG must be proposed. The Region III risked-based concentration was not exceeded for 2,4-Dimethylphenol.
6. Benzo(b)fluoranthene and Benzo(k)fluoranthene have individual RGs. These two constituents were combined and reported as Benzo(b,k)fluoranthene. Since Benzo(b)fluoranthene has a lower RG, it was conservatively assumed that the concentration of Benzo(b,k)fluoranthene was all Benzo(b)fluoranthene.

LEGEND

- ● SUBSURFACE SOIL SAMPLE LOCATIONS (65)
- 4.6 CONSTITUENT CONCENTRATIONEXCEEDS REMEDIATION GOAL (mg/kg)
- ND NOT DETECTED
- ** BACKGROUND LOCATION
- J ESTIMATED VALUE
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

GRAPHIC SCALE
0 50' 100'
1 inch = 100 ft.

SUBSURFACE SOIL
CONTAMINANT DELINEATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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REVISIONS		
DRAWN BY CAB	DATE 8/3/98	CADD NO. RISUB
DESIGN BY GBK	SCALE 1"=100'	FIGURE NO. 18
CHECKED BY GBK	PROJECT NO. 979007.A	SHEET NO.

Preliminary Sediment Remediation Goals[1]						
GROUP	CONSTITUENT	HBRG[2]	DD(SD–01)[3,4]	GC(BK–S1)[3,5]	CFR(SS–14)[3,6]	MDL[7]
METALS	Arsenic	4.6	3.8	ND[8]	4.9	–
	Chromium	78	14	ND	6.8	–
	Copper	620	29	ND	74	–
SEMI–VOLATILES	2–Methylnaphthalene	460	ND	ND	NA[9]	–
	Acenaphthene	940	0.130J	ND	24	–
	Acenaphthylene	460	ND	ND	ND	–
	Anthracene	4600	0.170J	ND	13	–
	Benzo(a)anthracene	0.88	0.86	ND	6.4	–
	Benzo(a)pyrene	0.088	0.78	ND	6.3	0.33
	Benzo(b)fluoranthene[10]	0.88	1.4J	ND	6.6	–
	Benzo(k)fluoranthene[10]	8.8	1.4J	ND	ND	–
	Bis(2–ethylhexyl)phthalate	46	1.9	NA	NA	–
	Carbazole	0.088	0.200J	NA	ND	0.33
	Chrysene	88	1.2	ND	5.7	–
	Dibenzo(a,h)anthracene	0.088	ND	NA	ND	0.33
	Dibenzofuran	62	0.082J	ND	NA	–
	Di–n–butyl phthalate	1560	1.4	ND	NA	–
	Fluoranthene	620	2.2	0.300J	22	–
	Fluorene	620	0.110J	ND	NA	–
	Indeno(1,2,3–cd)pyrene	0.88	NA	ND	ND	–
	Naphthalene	620	ND	ND	20	–
	Pentachlorophenol	5.3	ND	ND	ND	–
	Phenanthrene	460	1.2	ND	40	–
	Pyrene	460	1.7	0.500J	NA	–
VOLATILES	1,2–Dichloropropane	9.4	ND	NA	ND	–
	Dichloromethane[11]	0.088	NA	NA	ND	–
	Ethylbenzene	1560	0.003J	NA	0.54	–
	Methyl Ethyl Ketone (MEK)	9400	ND	NA	NA	–
	Toluene	3200	0.16	NA	ND	–
	Xylenes	32,000	ND	NA	0.52	–

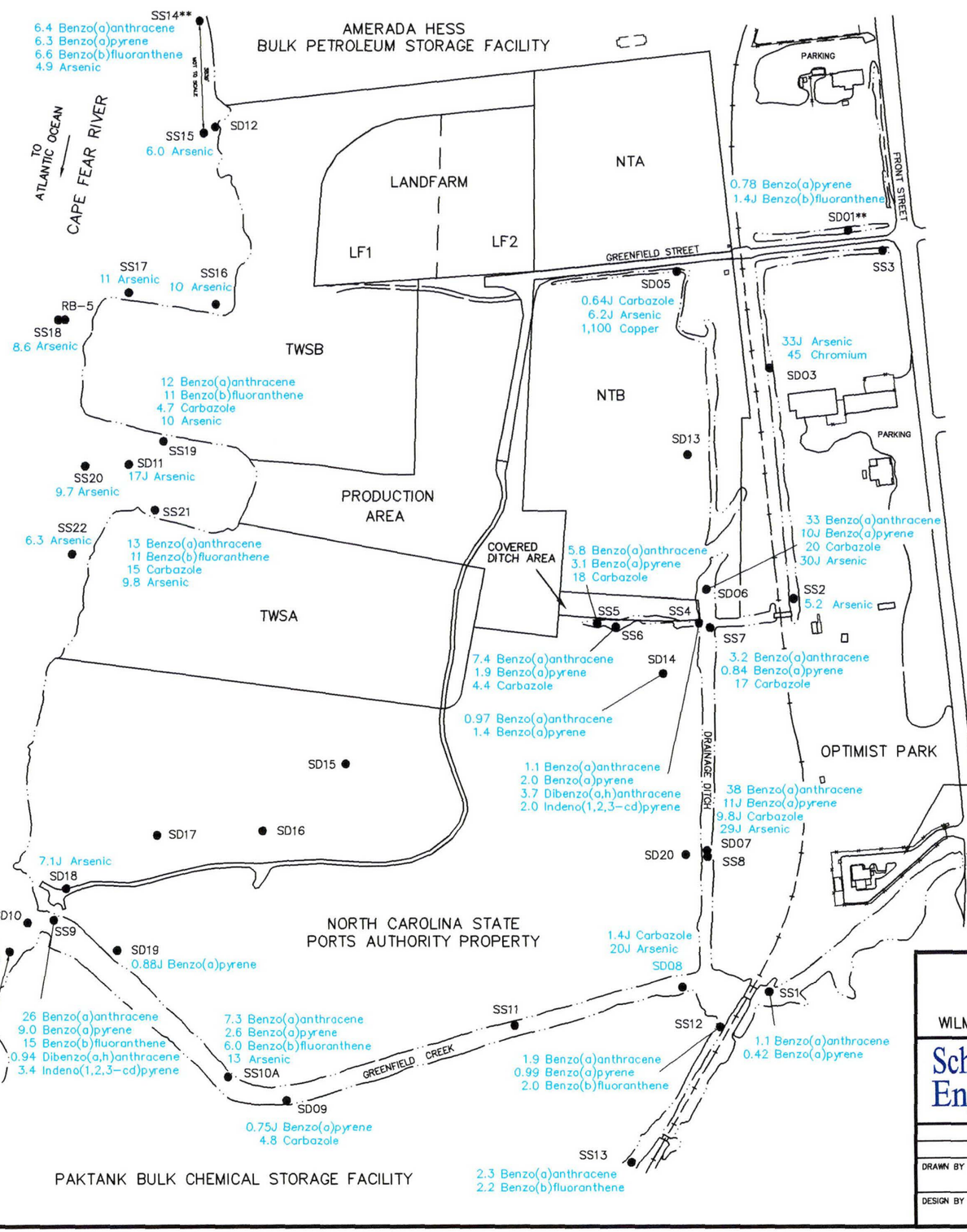
NOTE: All results are in mg/kg. Only detected constituents are listed.

1. Taken from the June 1998 Registered Environmental Consultant Program Implementation Guidance (RECIG) Appendix D. Preliminary sediment goals are the most stringent of 1) *the health–based soil remediation goals* or the background concentration, if less stringent and 2) remediation goals *sufficient to ensure* that contaminated sediment will not cause exceedances of the remediation goals for groundwater and surface water. Since the net discharge of groundwater is to the surface water and constituents are not present in the surface water, the HBRG was assumed to be the RG.
2. HEALTH BASED REMEDIATION GOAL (HBRG). Sediment HBRGs are the same as soil HBRGs listed in Table D–1 of RECIG. If not listed in Table D–1 constituents are screened using the HBRG of 0.088 mg/kg for Benzo(a)pyrene (carcinogens) and 460 mg/kg for pyrene (*non–carcinogens*). Carbazole exceeded the screening level (0.088 mg/kg) for carcinogens. A HBRG must be *calculated and approved by NCDENR for carbazole.* Cleanup to below method detection limit (MDL) is not required.
3. BACKGROUND SEDIMENT CONCENTRATION. Preliminary sediment goals are set at the HBRG or the background sediment concentration, whichever is less stringent.
4. DRAINAGE DITCH (DD) BACKGROUND SAMPLE.
5. GREENFIELD CREEK (GC) BACKGROUND SAMPLE.
6. CAPE FEAR RIVER (CFR) BACKGROUND SAMPLE.
7. METHOD DETECTION LIMIT (MDL). If the HBRG or the background concentration (whichever is less stringent) is less than the MDL, the MDL becomes the RG. The MDL is only listed on the table when it is the RG.
8. NOT DETECTED (ND)
9. NOT ANALYZED (NA)
10. Benzo(b)fluoranthene and Benzo(k)fluoranthene have individual HBRGs. These two constituents were combined and reported as Benzo(b,k)fluoranthene. Since Benzo(b)fluoranthene has the lowest HBRG, it was conservatively assumed that the concentration of Benzo(b,k)fluoranthene was all Benzo(b)fluoranthene.
11. Dichloromethane is a common laboratory contaminant.

J. Estimated Value

LEGEND

- ● SEDIMENT SAMPLES (45)
- 1.1 CONSTITUENT EXCEEDS PRELIMINARY SEDIMENT REMEDIATION GOAL (mg/kg)
- ** BACKGROUND LOCATION
- NTA, NTB — NON–TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2



NOTE: ONLY CONSTITUENTS THAT EXCEED THE PRELIMINARY SEDIMENT REMEDIATION GOALS ARE SHOWN ON MAP.

GRAPHIC SCALE

0 150' 300'

1 inch = 300 ft.

SEDIMENT
CONTAMINANT DELINEATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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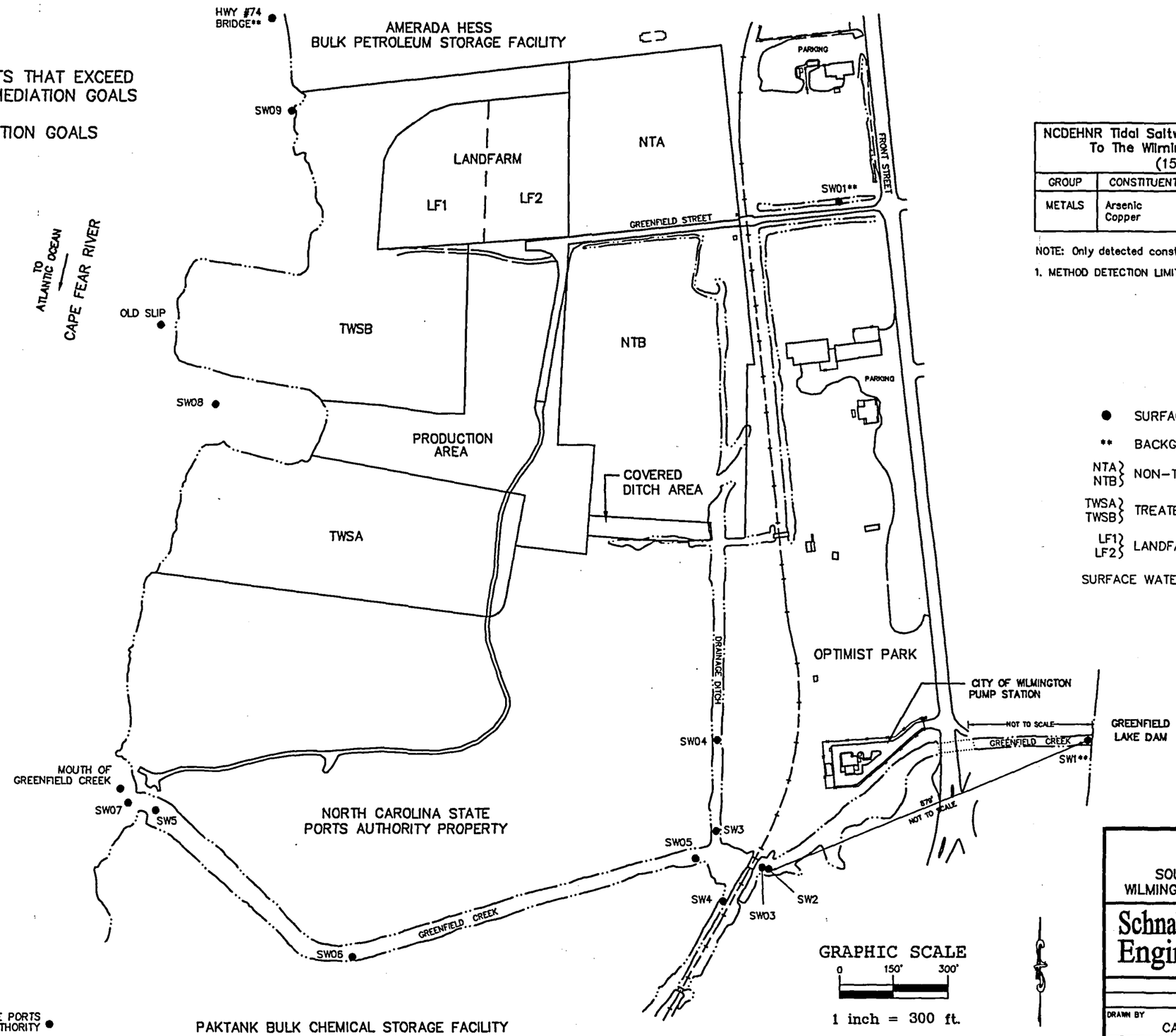
REVISIONS			CADD NO.
			RISEDIMENT
DRAWN BY: CAB	CHECKED BY: GBK	SCALE: 1"=300'	FIGURE NO. 19
DESIGN BY: GBK	DATE: 9/10/98	PROJECT NO. 979007.A	SHEET NO.

NOTE: ONLY CONSTITUENTS THAT EXCEED THE SURFACE WATER REMEDIATION GOALS ARE SHOWN ON MAP.
SURFACE WATER REMEDIATION GOALS WERE NOT EXCEEDED.



NCDEHNR Tidal Saltwater Class SC Standards Applicable To The Wilmington, North Carolina Facility (15A NCAC 2B .0200)				
GROUP	CONSTITUENT	STANDARD(mg/l)	SOURCE	MDL(mg/l)[1]
METALS	Arsenic Copper	0.05 0.003	Class SC Class SC	0.010 0.025

NOTE: Only detected constituents are listed.

1. METHOD DETECTION LIMIT (MDL). Cleanup to below MDL is not required.

LEGEND

- ● SURFACE WATER SAMPLES (17)
- ** BACKGROUND LOCATION
- NTA, NTB — NON-TREATED WOOD STORAGE A & B
- TWSA, TWSB — TREATED WOOD STORAGE A & B
- LF1, LF2 — LANDFARM AREA 1 & 2

SURFACE WATER SAMPLES COLLECTED IN 1996

SURFACE WATER CONTAMINANT DELINEATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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REVISIONS			CADD NO. RISURWAT
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 20
DESIGN BY GBK	DATE 8/3/98	PROJECT NO. 979007.A	SHEET NO.

LEGEND

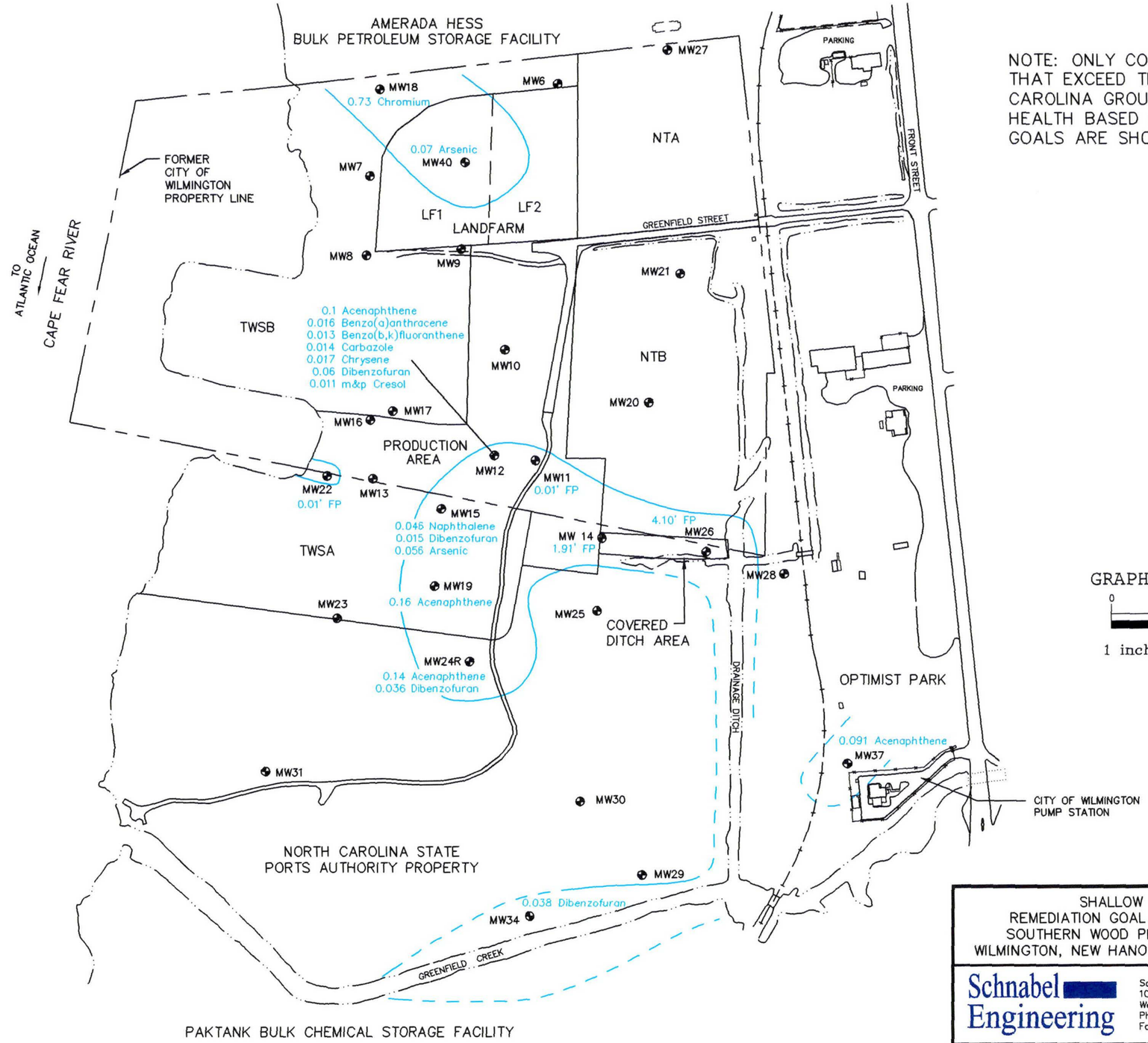
- MONITORING WELLS (29)
- 0.16 CONCENTRATION (mg/l)
- REMEDIATION GOAL DELINEATION LINE
- FP FREE PRODUCT (ft.)

GROUNDWATER DATA COLLECTED FEBRUARY 26 & 27, 1998.

North Carolina Groundwater Health Based Remediation Goals (15A NCAC 13 C.0300 and 15A NCAC 2L .0200)				
GROUP	CONSTITUENT	RG[1]	RBC[2]	MDL[3]
METALS	Arsenic	0.05	–	–
	Chromium	0.05	–	–
	Copper	1	–	–
SEMI–VOLATILES	2–Methylnaphthalene[4]	0.028	–	–
	Acenaphthene	0.08	–	–
	Acenaphthylene	0.21	–	–
	Anthracene	2.1	–	–
	Benzo(a)anthracene	0.0000479	–	0.010
	Benzo(b)fluoranthene[4,5]	0.000047	–	0.010
	Benzo(k)fluoranthene[4,5]	0.00047	–	0.010
	Carbazole[2]	–	0.0033	0.010
	Chrysene	0.00479	–	0.010
	Dibenzofuran[2]	–	0.015	0.010
	Fluoranthene	0.28	–	–
	Fluorene[6]	0.28	–	–
	m&p Cresol[7]	–	–	0.010
	Naphthalene	0.021	–	–
	Phenanthrene[8]	0.21	–	–
	Phenol	0.3	–	–
	Pyrene	0.21	–	–
VOLATILES	Benzene	0.001	–	–
	Ethylbenzene	0.029	–	–
	Toluene	1	–	–
	Xylene	0.53	–	–

NOTE: All results are in mg/L. Only detected constituents are listed.

1. REMEDIATION GOAL (RG). The lower of the 15A NCAC 2L Standard, Interim Maximum Allowable Concentration (IMAC), the USEPA non–zero MCLG, or the USEPA MCL was retained as the remediation goal. Clean up below method detection limit is not required.
2. RISK BASED CONCENTRATION (RBC). The USEPA Region III risk–based concentration is used to screen if further action is required when no RG has been approved. If the RBC is exceeded, an IMAC must be proposed. Because the RBC for carbazole, dibenzofuran, and m&p cresol has been exceeded, an IMAC must be calculated and approved. Once an IMAC is approved it can be used as the RG. Since the IMAC for these constituents has not been approved, the MDL is used as the RG for these constituents. The MDL is the lowest concentration at which an RG will be set. If the RBC is not exceeded, no IMAC evaluation is required.
3. METHOD DETECTION LIMIT (MDL). If the RG is less than the MDL, the MDL becomes the RG. The MDL is only shown when greater than the RG.
4. INTERIM MAXIMUM ALLOWABLE CONCENTRATIONS (IMAC).
5. Benzo(b)fluoranthene and Benzo(k)fluoranthene have individual IMACs. These two constituents were combined and reported as Benzo(b,k)fluoranthene during this sampling event. Since Benzo(b)fluoranthene has a lower IMAC, it was conservatively assumed that the concentration of Benzo(b,k)fluoranthene was all Benzo(b)fluoranthene.
6. 15A NCAC 2L STANDARD.
7. No RG or RBC is available for this constituent. An IMAC will be proposed. Otherwise the MDL will be the RG.



NOTE: ONLY CONSTITUENTS THAT EXCEED THE NORTH CAROLINA GROUNDWATER HEALTH BASED REMEDIATION GOALS ARE SHOWN ON MAP.

GRAPHIC SCALE

0 150' 300'

1 inch = 300 ft.

SHALLOW AQUIFER
REMEDIATION GOAL DELINEATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

Schnabel Engineering
Schnabel Engineering Associates, Inc.
104 Corporate Blvd., Suite 410
West Columbia, South Carolina 29169
Phone: 803–796–6240
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REVISIONS			CADD NO.
			SREMGOAL
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 21
DESIGN BY GBK	DATE 9/10/98	PROJECT NO. 979007.A	SHEET NO.

LEGEND

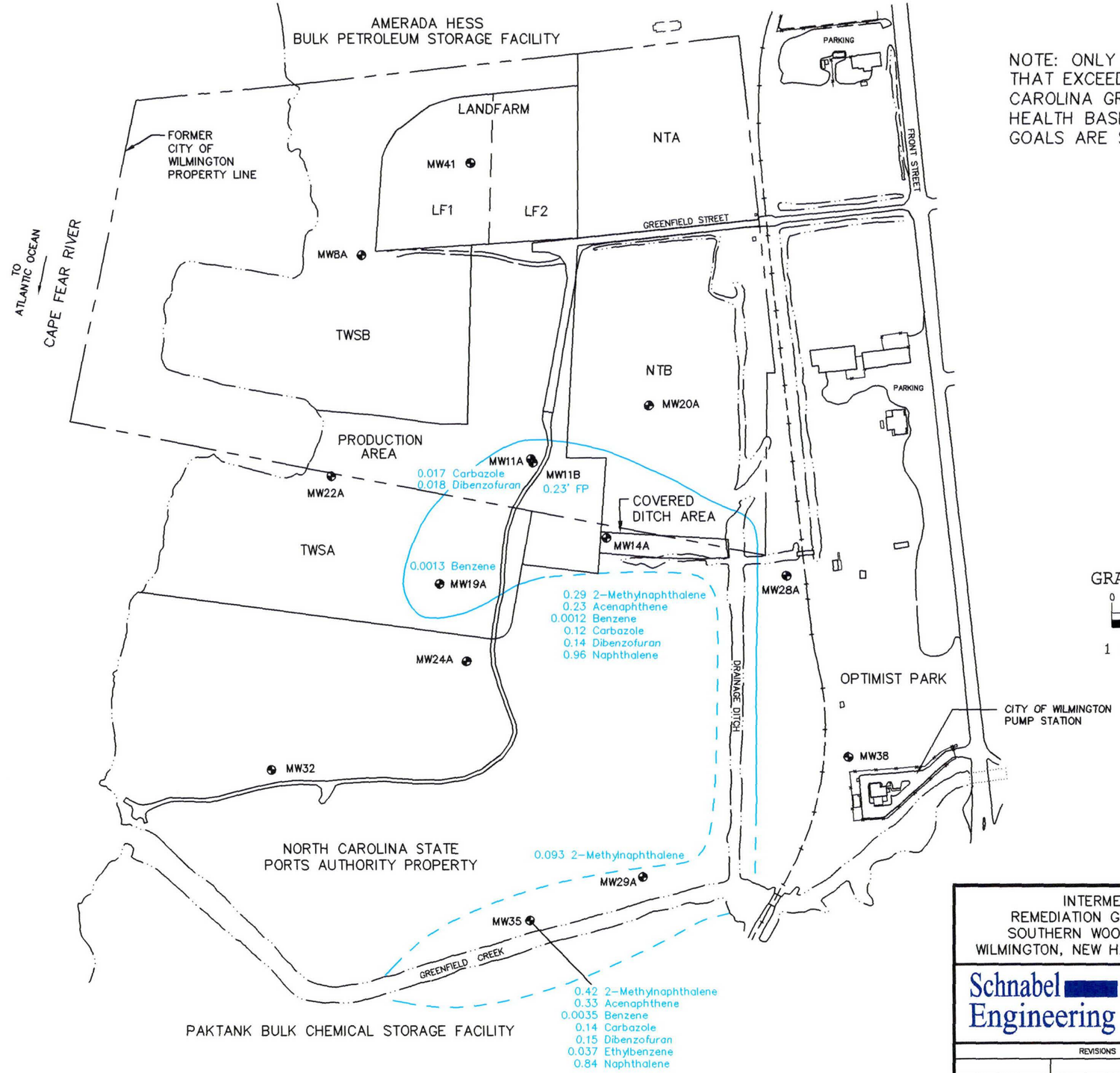
- MONITORING WELLS (14)
- 0.96 CONCENTRATION (mg/l)
- REMEDIATION GOAL DELINEATION LINE
- FP FREE PRODUCT (ft.)

GROUNDWATER DATA COLLECTED FEBRUARY 26 & 27, 1998.

North Carolina Groundwater Health Based Remediation Goals (15A NCAC 13 C.0300 and 15A NCAC 2L .0200)				
GROUP	CONSTITUENT	RG[1]	RBC[2]	MDL[3]
METALS	Arsenic	0.05	–	–
	Chromium	0.05	–	–
	Copper	1	–	–
SEMI-VOLATILES	2-Methylnaphthalene[4]	0.028	–	–
	Acenaphthene	0.08	–	–
	Acenaphthylene	0.21	–	–
	Anthracene	2.1	–	–
	Benzo(a)anthracene	0.0000479	–	0.010
	Benzo(b)fluoranthene[4,5]	0.000047	–	0.010
	Benzo(k)fluoranthene[4,5]	0.00047	–	0.010
	Carbazole[2]	–	0.0033	0.010
	Chrysene	0.00479	–	0.010
	Dibenzofuran[2]	–	0.015	0.010
	Fluoranthene	0.28	–	–
	Fluorene[6]	0.28	–	–
	m&p Cresol[7]	–	–	0.010
	Naphthalene	0.021	–	–
	Phenanthrene[6]	0.21	–	–
	Phenol	0.3	–	–
	Pyrene	0.21	–	–
VOLATILES	Benzene	0.001	–	–
	Ethylbenzene	0.029	–	–
	Toluene	1	–	–
	Xylene	0.53	–	–

NOTE: All results are in mg/L. Only detected constituents are listed.

1. REMEDIATION GOAL (RG). The lower of the 15A NCAC 2L Standard, Interim Maximum Allowable Concentration (IMAC), the USEPA non-zero MCLG, or the USEPA MCL was retained as the remediation goal. Clean up below method detection limit is not required.
2. RISK BASED CONCENTRATION (RBC). The USEPA Region III risk-based concentration is used to screen if further action is required when no RG has been approved. If the RBC is exceeded, an IMAC must be proposed. Because the RBC for carbazole, dibenzofuran, and m&p cresol has been exceeded, an IMAC must be calculated and approved. Once an IMAC is approved it can be used as the RG. Since the IMAC for these constituents has not been approved, the MDL is used as the RG for these constituents. The MDL is the lowest concentration at which an RG will be set. If the RBC is not exceeded, no IMAC evaluation is required.
3. METHOD DETECTION LIMIT (MDL). If the RG is less than the MDL, the MDL becomes the RG. The MDL is only shown when greater than the RG.
4. INTERIM MAXIMUM ALLOWABLE CONCENTRATIONS (IMAC).
5. Benzo(b)fluoranthene and Benzo(k)fluoranthene have individual IMACs. These two constituents were combined and reported as Benzo(b,k)fluoranthene during this sampling event. Since Benzo(b)fluoranthene has a lower IMAC, it was conservatively assumed that the concentration of Benzo(b,k)fluoranthene was all Benzo(b)fluoranthene.
6. 15A NCAC 2L STANDARD.
7. No RG or RBC is available for this constituent. An IMAC will be proposed. Otherwise the MDL will be the RG.



NOTE: ONLY CONSTITUENTS THAT EXCEED THE NORTH CAROLINA GROUNDWATER HEALTH BASED REMEDIATION GOALS ARE SHOWN ON MAP.

GRAPHIC SCALE

0 150' 300'

1 inch = 300 ft.

INTERMEDIATE AQUIFER
REMEDIATION GOAL DELINEATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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REVISIONS			CADD NO.
			IREMGOAL
DRAWN BY: CAB	CHECKED BY: GBK	SCALE: 1"=300'	FIGURE NO. 22
DESIGN BY: GBK	DATE: 9/10/98	PROJECT NO. 979007.A	SHEET NO.

LEGEND

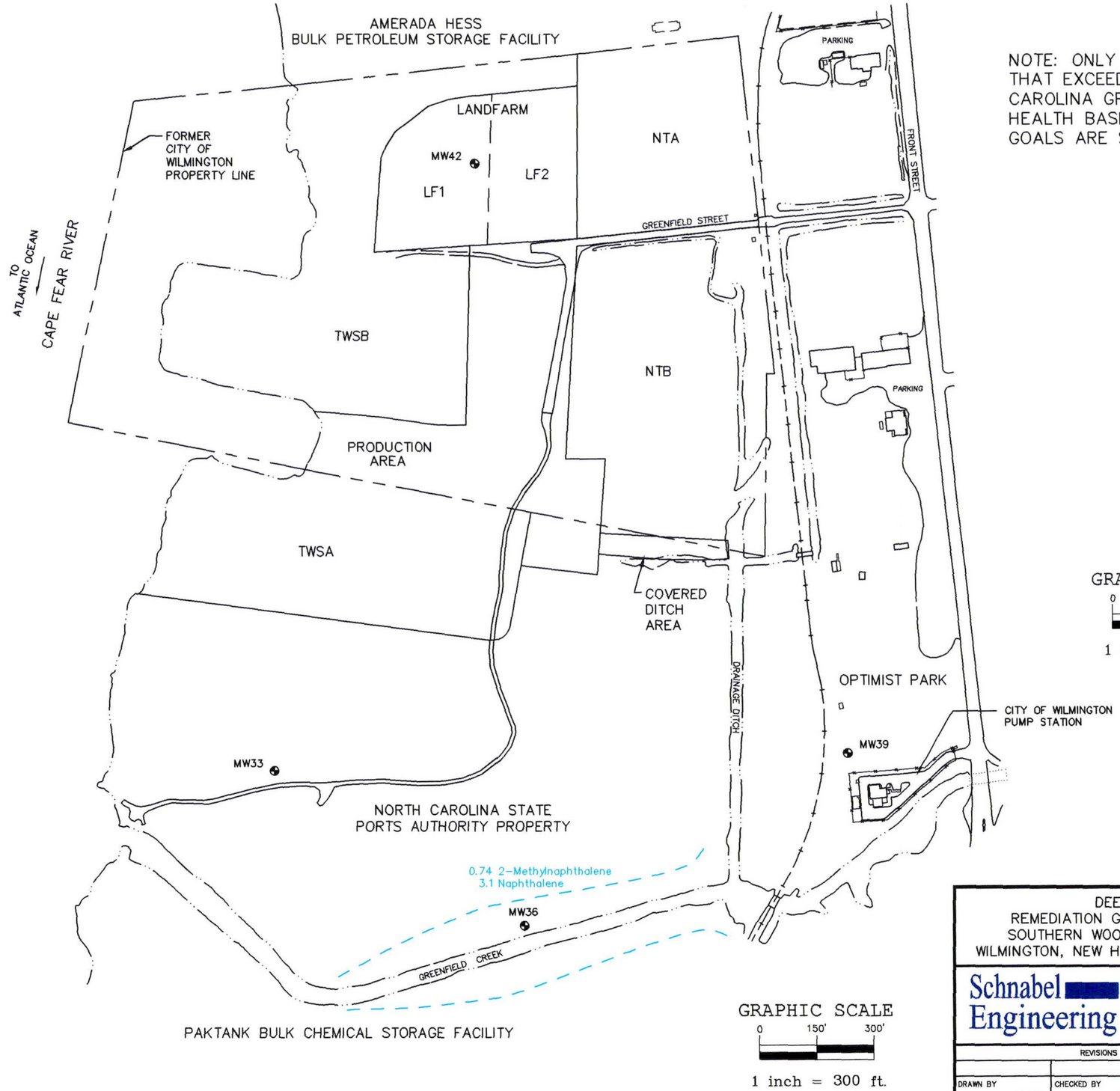
- MONITORING WELLS (4)
- 0.74 CONCENTRATION (mg/l)
- REMEDIATION GOAL DELINEATION LINE
- FP FREE PRODUCT (ft.)

GROUNDWATER DATA COLLECTED FEBRUARY 26 & 27, 1998.

North Carolina Groundwater Health Based Remediation Goals (15A NCAC 13 C.0300 and 15A NCAC 2L .0200)				
GROUP	CONSTITUENT	RG[1]	RBC[2]	MDL[3]
METALS	Arsenic	0.05	–	–
	Chromium	0.05	–	–
	Copper	1	–	–
SEMI-VOLATILES	2-Methylnaphthalene[4]	0.028	–	–
	Acenaphthene	0.08	–	–
	Acenaphthylene	0.21	–	–
	Anthracene	2.1	–	–
	Benzo(a)anthracene	0.0000479	–	0.010
	Benzo(b)fluoranthene[4,5]	0.000047	–	0.010
	Benzo(k)fluoranthene[4,5]	0.00047	–	0.010
	Carbazole[2]	–	0.0033	0.010
	Chrysene	0.00479	–	0.010
	Dibenzofuran[2]	–	0.015	0.010
	Fluoranthene	0.28	–	–
	Fluorene[6]	0.28	–	–
	m&p Cresol[7]	–	–	0.010
	Naphthalene	0.021	–	–
	Phenanthrene[6]	0.21	–	–
	Phenol	0.3	–	–
	Pyrene	0.21	–	–
VOLATILES	Benzene	0.001	–	–
	Ethylbenzene	0.029	–	–
	Toluene	1	–	–
	Xylene	0.53	–	–

NOTE: All results are in mg/L. Only detected constituents are listed.

1. REMEDIATION GOAL (RG). The lower of the 15A NCAC 2L Standard, Interim Maximum Allowable Concentration (IMAC), the USEPA non-zero MCLG, or the USEPA MCL was retained as the remediation goal. Clean up below method detection limit is not required.
2. RISK BASED CONCENTRATION (RBC). The USEPA Region III risk-based concentration is used to screen if further action is required when no RG has been approved. If the RBC is exceeded, an IMAC must be proposed. Because the RBC for carbazole, dibenzofuran, and m&p cresol has been exceeded, an IMAC must be calculated and approved. Once an IMAC is approved it can be used as the RG. Since the IMAC for these constituents has not been approved, the MDL is used as the RG for these constituents. The MDL is the lowest concentration at which an RG will be set. If the RBC is not exceeded, no IMAC evaluation is required.
3. METHOD DETECTION LIMIT (MDL). If the RG is less than the MDL, the MDL becomes the RG. The MDL is only shown when greater than the RG.
4. INTERIM MAXIMUM ALLOWABLE CONCENTRATIONS (IMAC).
5. Benzo(b)fluoranthene and Benzo(k)fluoranthene have individual IMACs. These two constituents were combined and reported as Benzo(b,k)fluoranthene during this sampling event. Since Benzo(b)fluoranthene has a lower IMAC, it was conservatively assumed that the concentration of Benzo(b,k)fluoranthene was all Benzo(b)fluoranthene.
6. 15A NCAC 2L STANDARD.
7. No RG or RBC is available for this constituent. An IMAC will be proposed. Otherwise the MDL will be the RG.



NOTE: ONLY CONSTITUENTS THAT EXCEED THE NORTH CAROLINA GROUNDWATER HEALTH BASED REMEDIATION GOALS ARE SHOWN ON MAP.

GRAPHIC SCALE
0 150' 300'
1 inch = 300 ft.

DEEP AQUIFER
REMEDIATION GOAL DELINEATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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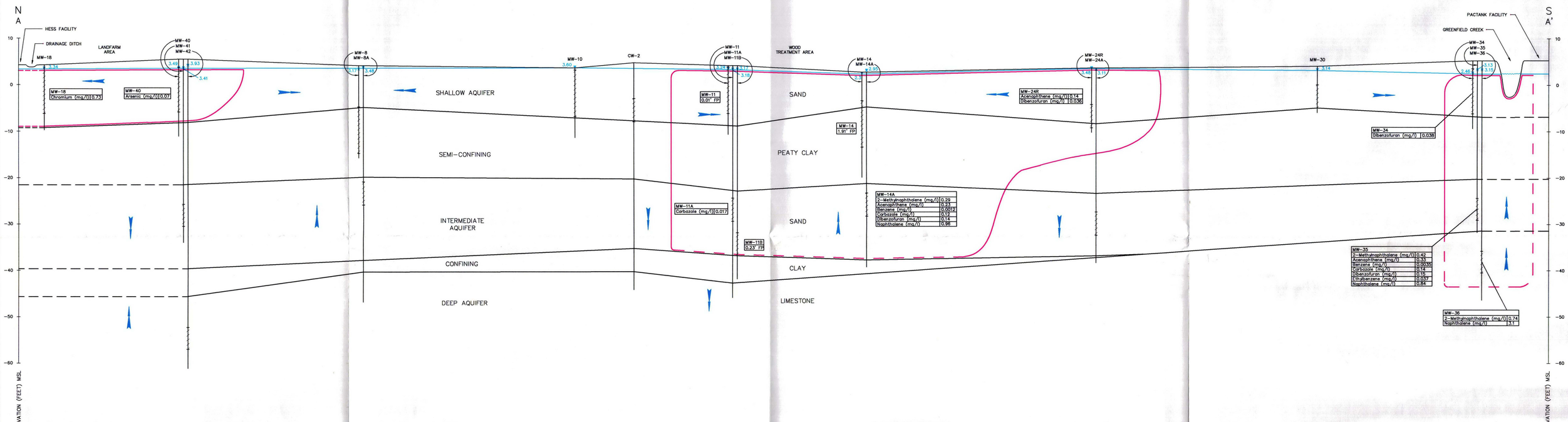
REVISIONS			CADD NO. DREMGOAL
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 23
DESIGN BY GBK	DATE 9/10/98	PROJECT NO. 979007.A	SHEET NO.



North Carolina Groundwater Health Based Remediation Goals (15A NCAC 13 C.0300 and 15A NCAC 2L .0200)				
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	Carbazole[2]	–	0.0033	0.010
	Chrysene	0.00479	–	0.010
	Dibenzofuran[2]	–	0.015	0.010
	Fluoranthene	0.28	–	–
	Fluorene[6]	0.28	–	–
	m&p Cresol[7]	–	–	0.010
	Naphthalene	0.021	–	–
	Phenanthrene[6]	0.21	–	–
	Phenol	0.3	–	–
	Pyrene	0.21	–	–
VOLATILES	Benzene	0.001	–	–
	Ethylbenzene	0.029	–	–
	Toluene	1	–	–
	Xylene	0.53	–	–

NOTE: All results are in mg/L. Only detected constituents are listed.

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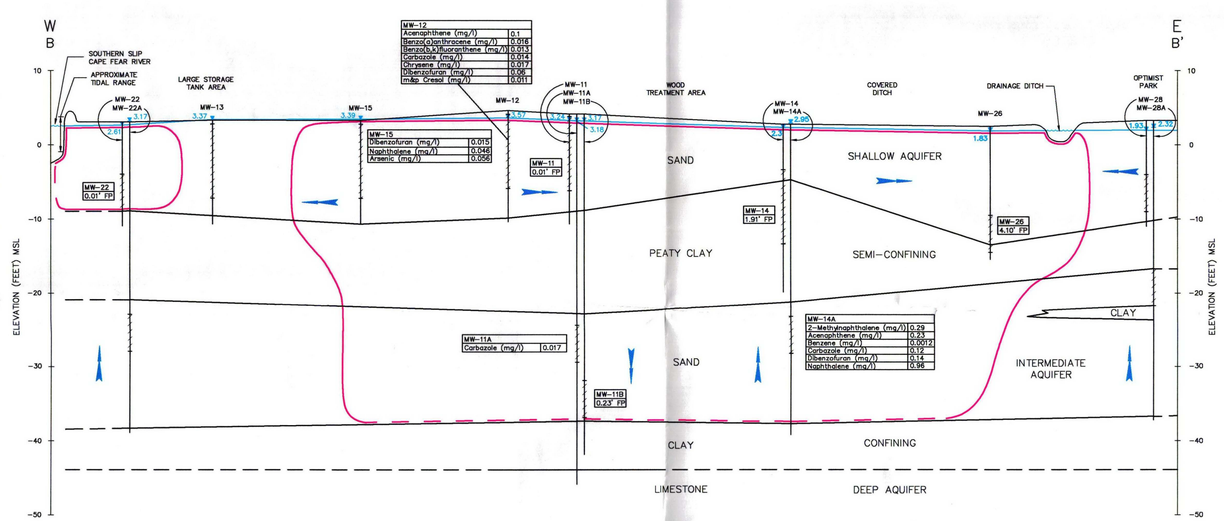
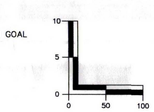
6. 15A NCAC 2L STANDARD.
7. No RG or RBC is available for this constituent. An IMAC will be proposed. Otherwise the MDL will be the RG.



NOTE: ONLY CONSTITUENTS THAT EXCEED THE NORTH CAROLINA GROUNDWATER HEALTH BASED REMEDIATION GOALS ARE SHOWN ON MAP.

LEGEND

- REMEDIATION GOAL DELINEATION LINE
- 0.014 CONCENTRATION EXCEEDS REMEDIATION GOAL
- SCREEN
- FP FREE PRODUCT (FT)
- GROUNDWATER ELEVATION
- GROUNDWATER VERTICAL AND HORIZONTAL HYDRAULIC GRADIENT



SCALE

HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

GROUNDWATER DATA COLLECTED FEBRUARY 26 & 27, 1998

HYDROGEOLOGIC CROSS-SECTIONS
A – A' AND B – B'
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

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REVISIONS		
DRAWN BY CAB	DATE 7/30/98	CADD NO. RIA&Bxs
DESIGN BY GBK	SCALE AS SHOWN	FIGURE NO. 24
CHECKED BY GBK	PROJECT NO. 979007.A	SHEET NO.