

342SERBSF10,619

342SERBSF10,619

Site Name (Subject): SOUTHERN WOOD PIEDMONT COMPANY

Site ID (Document ID): NCD058517467

Document Name (DocType): Correspondence (C)

Report Segment:

Description: Repository File, 1999 - 2000

Date of Document: 8/2/2000

Date Received:

Box: *Enter SF and # with no spaces* SF10,619

Access Level: PUBLIC

Division: WASTE MANAGEMENT

Section: SUPERFUND

Program (Document Group): SERB (SERB)

Document Category: FACILITY

**Print Report for
Record**

**Go to New
Blank Record**

**Go to New Record -
(default to last
record values)**

Delete Record

SOUTHERN WOOD PIEDMONT - WILMINGTON

List of Repository Documents & Information

New Hanover County Public Library

210 Chestnut Street

Wilmington NC 28401

Contact: Robert Cox

(910) 341-4390

Number Document Date Item Sent to Repository

Number	Document	Date Item Sent to Repository
1	Inactive Hazardous Sites Program Cleanup Guidance, August 1998	February/March 1999
2	Fact Sheet on Superfund	February/March 1999
3	Fact Sheet: Southern Wood Piedmont- Wilmington	February/March 1999
4	Site Inspection Prioritization (SIP) and References	February/March 1999
5	EPA's Expanded Site Inspection and References	February/March 1999
6	Draft Administrative Order on Consent	February/March 1999
7	Memorandum of Agreement (MOA)	February/March 1999
8	Public Meeting Handout (March 18, 1999)	March 18, 1999
9	<i>Wilmington Morning Star</i> Article on Deferral of Southern Wood Piedmont Site (March 11, 1999)	April 27, 1999
10	Notice of Public Meeting and AOC (March 3, 1999)	April 27, 1999
11	Public Meeting Transcript (March 18, 1999)	April 27, 1999
12	Memorandum to File, Stuart Parker (April 27, 1999)	April 27, 1999
13	Wilmington City Council Resolution (April 20, 1999)	April 27, 1999
14	State Deferral Request	May 1999
15	Finalized Administrative Order on Consent	May 1999
16	Draft Remedial Investigation Report (several volumes)	24 June 1999
17	NC Superfund Review and Comment	3 September 1999
18	Draft Supplemental RI Workplan (1 volume)	8 October 1999
19	NC Superfund and DWQ Review and Comment	4 February 2000
20	Response to Comments	6 March 2000
21	Superfund Reply to Response	20 April 2000

SOUTHERN WOOD PIEDMONT - WILMINGTON
List of Repository Documents & Information

New Hanover County Public Library
210 Chestnut Street
Wilmington NC 28401
Contact: Robert Cox
(910) 341-4390

Number	Document	Date Item Sent to Repository
22	Draft 2.0 Supplemental RI Workplan (1 volume)	23 May 2000
23	State Deferral RI Work Plan Fact Sheet	August 2000
24	Notice of Public Availability Session and RI Work Plan	
25	Supplemental Remedial Investigation (3 volumes)	October 2001

pat ads 7 Wednesday, August 2, 2000 3:37 PM
250084 (MAIN) - Page 1 - Composite



**NOTICE OF PUBLIC AVAILABILITY SESSION
AND REMEDIAL INVESTIGATION WORKPLAN,
NC DIVISION OF WASTE MANAGEMENT:
SOUTHERN WOOD PIEDMONT SITE
WILMINGTON, NEW HANOVER COUNTY, NC**

The Division of Waste Management, Superfund Section, will conduct a public availability session at the New Hanover County Public Library, on August 9, 2000 from 3 pm to 7 pm. The purpose of the informal session is to answer any questions about the planned Remedial Investigation at the Southern Wood Piedmont Co. Site, which is undergoing assessment and cleanup of hazardous substances under State Oversight.

The Southern Wood Piedmont site, located at Greenfield Street at the Cape Fear River, is a former wood treating facility which closed in 1983. Investigations completed at the site to date indicate extensive soil and groundwater by creosote components which have also been detected in stream sediments between the property and the Cape Fear River. Dioxin has also been detected at the site. Currently, the US Environmental Protection Agency (EPA) has deferred federal action at this site while Southern Wood Piedmont Co. cleans up the site under State authority.

The NC Division of Waste Management (Division) has entered into an Administrative Order (AOC) with Southern Wood Piedmont Co. to conduct a voluntary cleanup of hazardous substances pursuant to N.C.G.S. 130A-310.9(b). The State has reviewed and commented on a draft Remedial Investigation (RI) workplan for further delineation of the SWP site's impact on soil and groundwater quality, and on adjacent surface waterways and fisheries.

An administrative record housing copies of the pertinent documents, including a copy of the draft RI Workplan, is available in the information repository located at:

New Hanover County Public Library
Reference Desk
210 Chestnut Street
Wilmington, NC 28401
Telephone: (910) 341-4390

This information is also available in Raleigh, NC at the following location:

NC Division of Waste Management
401 Oberlin Road - Suite 150
Raleigh, North Carolina 27605

To schedule an appointment:

Contact Mr. Scott Ross at (919) 733-2801, ext. 328

The meeting will begin the 30-day public comment period, and the Division will seek public comment on the draft RI Workplan. Oral and written comments will be accepted at the meeting, and written comments will be accepted through the mail during the 30-day comment period. Written comments or questions should be directed to:

Stuart F. Parker, Hydrogeologist
NC Division of Waste Management
Superfund Section
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605
(919) 733-2801, ext. 280
FAX: (919) 723-4811

ALL WRITTEN COMMENTS ON THE DRAFT RI WORKPLAN MUST BE POSTMARKED NO LATER THAN SEPTEMBER 8, 2000.



STATE DEFERRAL RI WORKPLAN FACT SHEET

Southern Wood Piedmont - Wilmington Site

Greenfield Street
Wilmington, New Hanover County, NC

AUGUST 2000

INTRODUCTION

This fact sheet describes the proposed Remedial Investigation (RI) Workplan for the Southern Wood Piedmont Site in Wilmington, New Hanover County, N.C. The document includes: site description and history; a summary of previous investigations; proposed RI work activities; and a glossary of terms and acronyms commonly used in the Superfund program. Words highlighted in bold print within this fact sheet are defined in the glossary.

The NC Superfund Section is conducting a public availability session on August 9, 2000, from 3:00 to 7:00 p.m., at the New Hanover County Public Library, 210 Chestnut St., Wilmington, NC. This informal session is intended to provide information to help the public become more informed and involved in the future disposition and remediation of the site.

additional areas contaminated by hazardous materials as a result of historical site activity.

The site's northern portion is open lawn, while the southern half is wooded. The property drains south through a drainage ditch system to Greenfield Creek, then west to the Cape Fear River tidal estuary (Figure 2). Portions of the site flood during high tides or river floods. The site is currently vacant, however, the NC Ports Authority proposes to develop the site to expand its existing storage facilities.

SITE DESCRIPTION

The 96-acre Southern Wood Piedmont (SWP) Site is located at the west end of Greenfield Street on the Cape Fear River waterfront, in Wilmington, New Hanover County, NC (Figure 1). The NC State Ports Authority owns 93 acres of the site. The remaining three acres, located in the site's southeast corner, are privately owned.

The surrounding neighborhood is mixed industrial, commercial and residential. Petroleum storage terminals border the site to the north and south, while a park and commercial facilities on Front Street border the site to the east. The Nesbitt Courts apartments are located east of the site on 2nd Street.

The site includes these areas, plus any



STATE DEFERRAL RI WORKPLAN FACT SHEET

Southern Wood Piedmont - Wilmington Site

Greenfield Street

Wilmington, New Hanover County, NC

AUGUST 2000

INTRODUCTION

This fact sheet describes the proposed Remedial Investigation (RI) Workplan for the Southern Wood Piedmont Site in Wilmington, New Hanover County, N.C. The document includes: site description and history; a summary of previous investigations; proposed RI work activities; and a glossary of terms and acronyms commonly used in the Superfund program. Words highlighted in bold print within this fact sheet are defined in the glossary.

The NC Superfund Section is conducting a public availability session on August 9, 2000, from 3:00 to 7:00 p.m., at the New Hanover County Public Library, 210 Chestnut St., Wilmington, NC. The session is intended to provide information to help the public become more informed and involved in the future disposition and remediation of the site.

The site includes these areas, plus any additional areas contaminated by hazardous materials as a result of historical site activity.

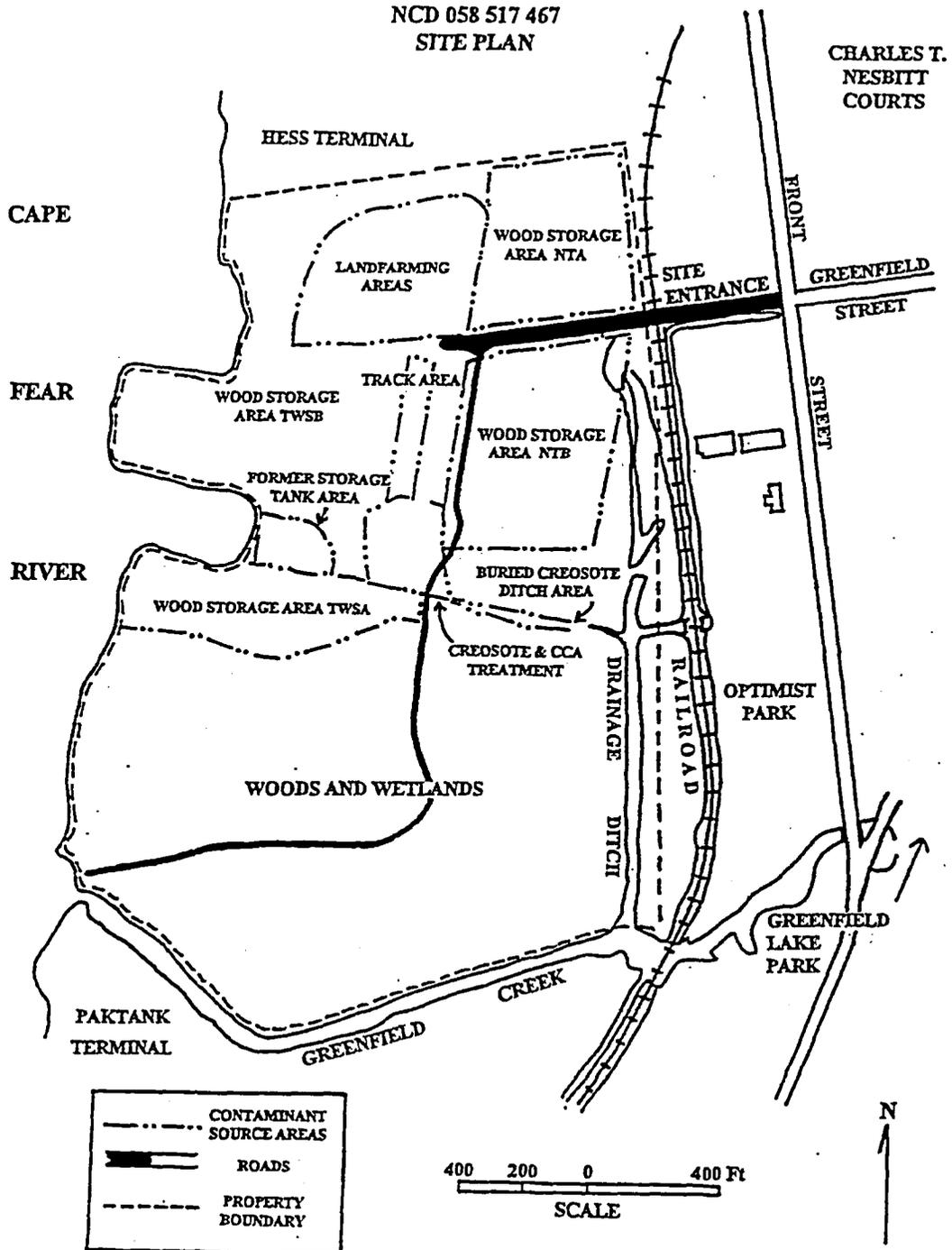
The site's northern portion is open lawn, while the southern half is wooded. The property drains south through a drainage ditch system to Greenfield Creek, then west to the Cape Fear River tidal estuary (Figure 2). Portions of the site flood during high tides or river floods. The site is currently vacant, however, the NC Ports Authority proposes to develop the site to expand its existing storage facilities.

SITE DESCRIPTION

The 96-acre Southern Wood Piedmont (SWP) Site is located at the west end of Greenfield Street on the Cape Fear River waterfront, in Wilmington, New Hanover County, NC (Figure 1). The NC State Ports Authority owns 93 acres of the site. The remaining three acres, located in the site's southeast corner, are privately owned.

The surrounding neighborhood is mixed industrial, commercial and residential. Petroleum storage terminals border the site to the north and south, while a park and commercial facilities on Front Street border the site to the east. The Nesbitt Courts apartments are located east of the site on 2nd Street.

FIGURE 2:
 SOUTHERN WOOD PIEDMONT CO.
 WILMINGTON, NC
 NCD 058 517 467
 SITE PLAN



SITE HISTORY

The site was used for wood treating beginning in the mid-1930s. Southern Wood Piedmont Company (formerly Southern Wood Preserving Company) operated the facility from 1964 until it closed in 1983. Creosote, chromated copper arsenate (CCA) and pentachlorophenol (PCP) were historically used for wood treating on site, and diesel fuel was also stored and used onsite. Wood treating occurred within the north-central part of the site, treated lumber was stored outdoors in the northern half of the site. For several years, creosote waste accumulated in an east-west drainage ditch located south-southeast of the production area (Figure 2).

In 1985, under an **Administrative Order on Consent** with the State, Southern Wood Piedmont (SWP) excavated surface and subsurface soils at the site's creosote ditch (a.k.a., Covered Ditch) and former production areas. Soils heavily contaminated with arsenic were disposed at a **hazardous waste landfill** in SC. Soils stained with creosote were **landfarmed** in the northern part of the site.

PREVIOUS INVESTIGATIONS

During the 1980s and early 1990s, the site's landfarming areas were sampled to monitor **biodegradation** of creosote in the landfarmed soil. Results indicated partial breakdown of creosote constituents. Sampling results did not indicate that the landfarming operation had contaminated local groundwater.

During the early-to-mid 1990s soil sampling by SWP revealed creosote contamination in soils throughout the site's former production and storage areas. **Dioxin** and furan contamination was detected in soils from the landfarm areas, but no other samples were tested for dioxin.

In 1992 and 1993, SWP installed and sampled **groundwater monitoring wells** at the site. Sampling revealed creosote contamination in groundwater in the **sandy water-table aquifer** directly beneath the site. In addition, explorations beneath the former creosote ditch and production areas revealed that liquid creosote had accumulated on top of a peat layer beneath the shallow sand, about 15 feet underground. Groundwater in a deeper sandy aquifer, beneath the peat, also contained dissolved creosote.

In 1994 and 1996, sediment sampling revealed creosote contamination in the site's drainage ditch and downstream in Greenfield Creek. Sediment contamination was not detected in the Cape Fear River below the mouth of the creek, however, creosote was detected in sediment at the site's western waterfront.

In 1995, the North Carolina Department of Environment and Natural Resources (NCDENR) Superfund Section completed a **Site Inspection Prioritization (SIP)** report, summarizing site history and the results of prior investigations. The SIP determined that contaminant migration in Greenfield Creek extended beyond mapped wetland frontage, and that the creek was used for fishing. The SIP determined the site to be a candidate for listing on the federal **National Priorities List (NPL)** of Superfund sites.

The US Environmental Protection Agency Region IV (EPA) completed an **Expanded Site Inspection (ESI)** in July 1997. The ESI confirmed soil, groundwater and creek sediment contamination at the site. ESI sampling also detected dioxins in surface soils from the site's former production and wood storage areas (Figure 2). Fish samples from Greenfield Creek were tested for site contaminants (except for dioxin/furan), but results were inconclusive.

SITE HISTORY

The site was used for wood treating beginning in the mid-1930s. Southern Wood Piedmont Company (formerly Southern Wood Preserving Company) operated the facility from 1964 until it closed in 1983. **Creosote, chromated copper arsenate (CCA) and pentachlorophenol (PCP)** were historically used for wood treating on site, and diesel fuel was also stored and used onsite. Wood treating occurred within the north-central part of the site, treated lumber was stored outdoors in the northern half of the site. For several years, creosote waste accumulated in an east-west drainage ditch located south-southeast of the production area (Figure 2).

In 1985, under an **Administrative Order on Consent** with the State, Southern Wood Piedmont (SWP) excavated surface and subsurface soils at the site's creosote ditch (a.k.a., Covered Ditch) and former production areas. Soils heavily contaminated with arsenic were disposed at a **hazardous waste landfill** in SC. Soils stained with creosote were **landfarmed** in the northern part of the site.

PREVIOUS INVESTIGATIONS

During the 1980s and early 1990s, the site's landfarming areas were sampled to monitor **biodegradation** of creosote in the landfarmed soil. Results indicated partial breakdown of creosote constituents. Sampling results did not indicate that the landfarming operation had contaminated local groundwater.

During the early-to-mid 1990s soil sampling by SWP revealed creosote contamination in soils throughout the site's former production and storage areas. **Dioxin** and furan contamination was detected in soils from the landfarm areas, but no other samples were tested for dioxin.

In 1992 and 1993, SWP installed and sampled **groundwater monitoring wells** at the site. Sampling revealed creosote contamination in groundwater in the **sandy water-table aquifer** directly beneath the site. In addition, explorations beneath the former creosote ditch and production areas revealed that liquid creosote had accumulated on top of a peat layer beneath the shallow sand, about 15 feet underground. Groundwater in a deeper sandy aquifer, beneath the peat, also contained dissolved creosote.

In 1994 and 1996, sediment sampling revealed creosote contamination in the site's drainage ditch and downstream in Greenfield Creek. Sediment contamination was not detected in the Cape Fear River below the mouth of the creek, however, creosote was detected in sediment at the site's western waterfront.

In 1995, the North Carolina Department of Environment and Natural Resources (NCDENR) Superfund Section completed a **Site Inspection Prioritization (SIP)** report, summarizing site history and the results of prior investigations. The SIP determined that contaminant migration in Greenfield Creek extended beyond mapped wetland frontage, and that the creek was used for fishing. The SIP determined the site to be a candidate for listing on the federal **National Priorities List (NPL)** of Superfund sites.

The US Environmental Protection Agency Region IV (EPA) completed an **Expanded Site Inspection (ESI)** in July 1997. The ESI confirmed soil, groundwater and creek sediment contamination at the site. ESI sampling also detected dioxins in surface soils from the site's former production and wood storage areas (Figure 2). Fish samples from Greenfield Creek were tested for site contaminants (except for dioxin/furan), but results were inconclusive.

To summarize, investigations completed at SWP indicate that the site historically contaminated surface and subsurface soils, shallow and intermediate groundwater aquifers, and Greenfield Creek. The ESI results confirmed the site as a candidate for the National Priorities List.

FEDERAL SUPERFUND PROGRAM

The Superfund program is a federal cleanup program authorized under the **Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)** and the **Superfund Amendments and Reauthorization Act of 1986 (SARA)**. These acts authorize the US EPA to investigate and clean up uncontrolled and unregulated hazardous waste sites.

Figure 3 is an overview of the Superfund process. Following **Site Discovery**, **Site Assessment** documents that site contaminants are a likely hazard to human health or the environment. If the site qualifies for **NPL listing** and federal cleanup, a **Remedial Investigation and Feasibility Study (RI/FS)** is then conducted.

An RI/FS typically takes 18 to 24 months to complete. The primary objectives are to characterize the nature and extent of site contamination, to determine human health and environmental risk posed by contamination, and to evaluate potential remedial options.

Possible remedies are compared based on cost and effectiveness in meeting cleanup goals. The remedy selection is documented in a **Record of Decision (ROD)**. The chosen remedy is applied to the site cleanup, and the design chosen is presented in the **Remedial Design (RD)**. Remedial Design may take up to a year. The actual cleanup, referred to as the **Remedial Action (RA)**, may take several years, or decades for groundwater remediation.

STATE DEFERRAL

During May 1999, as an alternative to NPL listing and federal cleanup, the EPA agreed to defer NPL listing of the SWP Wilmington site while voluntary Remedial Investigation and site cleanup was performed by SWP, the potentially responsible party (PRP). This option is referred to as a **State Deferral**.

State Deferral is outlined in a **Memorandum of Agreement** between North Carolina and the EPA. Under the deferral program, the PRP(s) signed an **Administrative Order on Consent (AOC)** agreement with the state to conduct remedial investigation and cleanup under state rather than federal oversight. The site remains subject to both federal and state cleanup standards for protectiveness of human health and the environment. Figure 4 presents an overview of the State Deferral process, which was described in the February 1999 Proposed Deferral Site Fact Sheet.

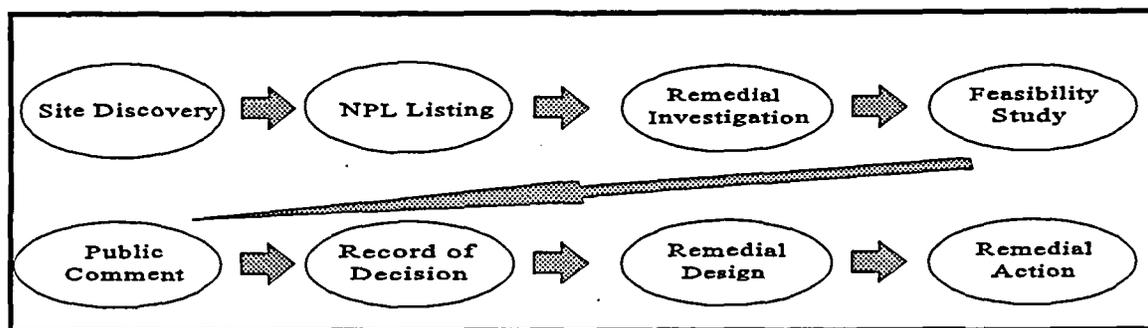


Figure 3. Superfund Process

REMEDIAL INVESTIGATION WORKPLAN DEVELOPMENT

During June 1999, following approval and signing of the State Deferral AOC, SWP submitted a draft Remedial Investigation Report to the NC Superfund Section for review and comment. This document summarized environmental investigations and site-specific data generated by SWP to date.

The NC Superfund Section reviewed the draft report, identifying additional sampling and data requirements for completion of the RI. These included the need for more complete characterization of the site's groundwater contamination, as required by the State of NC Administrative Code, Title 15A, Subchapter 2L. The Superfund Section noted that the extent of free-product creosote contamination beneath the site had not been adequately characterized for potential recovery.

Additional comments by the NC Superfund Section addressed location and/or spacing of RI soil and sediment samples, the need for additional groundwater data from the petroleum facilities north and south of the site, and the collection of fish tissue samples during the RI. The NC Division of Water Quality also reviewed portions of the submittal, commenting on fish tissue sampling methodology, ecotoxicity study of site sediment contaminants, and ecological risk

assessment to be completed during the RI. Southern Wood Piedmont Company responded to the initial comments during March and April 2000 and, after additional communications with NCDENR, completed its Draft 2.0 Supplemental Remedial Investigation Workplan on May 23, 2000. The supplemental workplan addressed comments made by DENR.

RI ACTIVITIES

The following is a list of Remedial Investigation Activities proposed by SWP, designed to address additional data requirements identified by the NC Superfund Section. These RI objectives are intended to delineate further the extent of contamination at the site, and its likelihood of having an impact on human health or the environment. The RI results will help determine the future course of site remediation. RI activities are described in detail in Section 3.2 of the Supplemental RI Workplan.

DNAPL Characterization: The extent and physical nature of dense, non-aqueous phase liquid (DNAPL) creosote beneath the site requires further investigation. Areas of suspected accumulation in the subsurface will be investigated by collecting direct push core samples of subsurface soil, to determine the presence or absence of creosote and its potential mobility for future removal from the subsurface. Approximately 36 locations will be cored to delineate the spill area. In addition, 2 additional

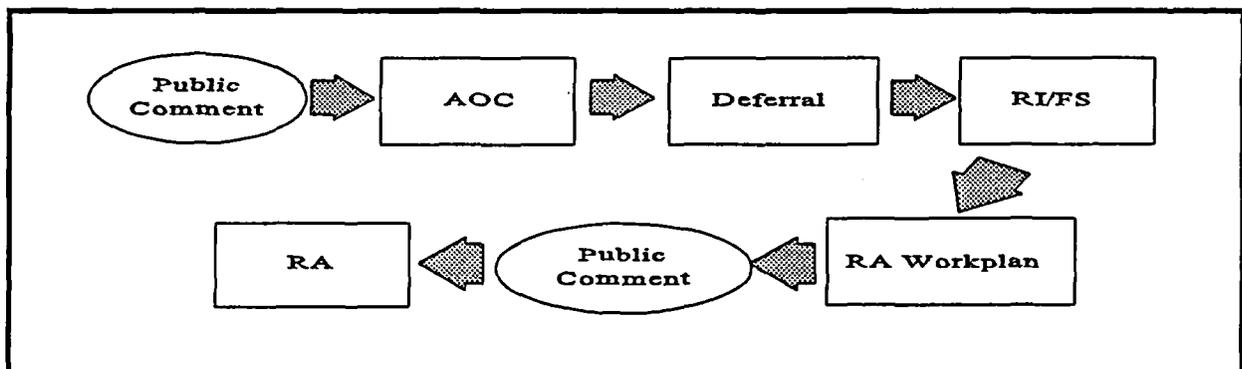


Figure 4. Deferral Process

shallow sand monitoring wells and one deep sand monitoring well will be installed near the thickest known creosote accumulations to determine the present thickness and pumpability of the creosote product. The deeper well will be cased into the intervening peat layer to reduce the likelihood of cross-contamination from the upper to the lower aquifer.

Groundwater Sampling: The site's existing monitoring wells will be resampled to characterize current groundwater conditions in the shallow sand, deep sand, and bedrock aquifers at the site. In addition, the Amerada Hess and Paktank petroleum companies will be contacted to determine whether groundwater sample data are available from monitoring wells at their facilities, north and south of the site.

Groundwater samples will be collected by SWP in accordance with the USEPA's Environmental Investigations Standard Operating Procedure Quality Assurance Manual, and will be analyzed at a North Carolina Certified Laboratory.

Limited groundwater sampling for dioxin/furan contamination will be conducted in the site's former covered ditch and production areas and near Greenfield Creek (Fig. 2), plus an off-site background location. The monitoring wells to be sampled are closest to soil samples where dioxin/furan contamination has been detected. Limited Subsurface Soil Sampling for dioxins/furans will be conducted at these respective soil locations as well.

Groundwater level measurements will be completed at the site's monitoring wells to characterize the present groundwater flow pathways within and between the site's semi-connected aquifers. If possible, monitoring will also occur at the adjacent petroleum terminals. Installation of staff gauges in

adjacent surface water bodies will help determine the relationship between groundwater and surface water flow. All of the above measurements will be repeated at intervals throughout the tidal cycle.

Sediment Sampling: Selected locations on the main drainage ditch and Greenfield Creek will be sampled for dioxins/furans, to determine whether these contaminants exist at elevated levels in the creek system. Approximately 15 supplemental sediment samples will be collected to tighten sample resolution to approximately 200-foot intervals, and to delineate "hot" contaminated zones along the waterways. Sediment will also be sampled at an adjacent wetland area and at an off-site background location.

To support an assessment of the ecotoxicity of contaminated sediments physico-chemical parameters of the sediment samples will be tested, including particle size, total organic carbon, salinity, pH and ammonia. In addition the parameter Acid Volatile Sulfide (AVS) of sediment samples will be tested to determine the likelihood of sediment contaminants actually passing into the aquatic food chain.

Fish Tissue Sampling: To determine whether site contaminants have contaminated game and other food fish in the drainage ditch and Greenfield Creek, fish tissue sampling will be conducted during the RI. Fish will be caught approximately 6 locations, including 3 on Greenfield Creek, and reference samples from Greenfield Lake, and two nearby, separate creeks to establish ambient contaminant levels.

Fish sampling, where possible, will represent both recreational fish caught (and eaten) by humans, and natural prey of fish eating birds and animals. Fish will either be caught by tackle and/or net, or stunned by localized electroshock. Sampling will be overseen by Division of Water Quality Environmental Services Branch (ESB) personnel.

RISK ASSESSMENT

Analytical data generated by the Remedial Investigation will be used to support a Human Health and Ecological Risk Assessment of the SWP site, to characterize the risk to human health and to the environment posed by contaminants existing at the site. In particular, the assessment will determine the risks posed to the Greenfield Creek ecosystem by sediment contamination in the creek, and the risk posed to humans by consumption of fish living in the creek. The Risk Assessment will be used to determine appropriate action during subsequent phases of site remediation.

COMMUNITY INVOLVEMENT

Community officials, civic leaders, residents and other interested parties are encouraged to learn more about the Southern Wood Piedmont site, the Federal Superfund program and the State Deferral program. The state also seeks community input on the site, the draft AOC and the decision to defer the site to the state rather than proceed with the federal Superfund process.

Both the City of Wilmington and the State Ports Authority have expressed their interest in expediting cleanup and redevelopment of the site. Currently, the State Ports Authority plans to redevelop the site to expand their warehouse facilities.

The NCDENR, Superfund Section has established an **Information Repository**, which will be maintained at:

The New Hanover County
Public Library, Reference Desk
210 Chestnut Street
Wilmington, North Carolina 28401
(910) 341-4390

Documents currently available at the repository are listed below. All site documents generated after the deferral will be added to the repository. A list of documents held by the repository will be updated and available at the Southern Pines Public Library Reference Desk.

All documents in the local Information Repository, as well as all historical state file information about the SWP-Wilmington site, are available for public review and photocopying at the office of the NC Superfund Section in Raleigh, NC. Individuals wishing to review this files should contact:

Scott Ross, Public Information Assistant
Superfund Section
Division of Waste Management
NC DENR
401 Oberlin Road, Suite 150
Raleigh, NC 27605
Telephone: (919) 733-2801, ext. 328

The State will conduct an informal public Information Session on August 9, 2000 from 3 to 7 p.m. The session will be held in the New Hanover County Public Library's large meeting room, 210 Chestnut Street, Wilmington, N.C.

The purpose of the session will be to discuss the RI Workplan and to identify and address any public questions or concerns about the work plan. The state will solicit comments and questions from the public. The meeting will begin the 30-day comment period ending September 8, 2000. All Written comments must be postmarked no later than that date.

- State Contact and Project Manager

Questions and comments about the site, the Deferral process or Site Remediation should be directed to:

Stuart Parker, Hydrogeologist
NC Division of Waste Management
Superfund Section
401 Oberlin Road, Suite 150
Raleigh, NC 27605
Telephone: (919) 733-2801, ext. 280
Fax: (919) 733-4811
Email: stuart.parker@ncmail.net

- US EPA Contact

Questions about the Federal Superfund program should be directed to:

Luis Flores
Remedial Project Manager
NC Site Management Section
US EPA Region IV
Waste Management Division
61 Forsyth Street S.W., 11th Floor
Atlanta, GA 30303-3104
Telephone: (404) 562-8807, or
(800) 435-9233

GLOSSARY:

Administrative Order on Consent (AOC) -
A voluntary agreement between the state and potentially responsible parties that outlines steps for completing remedial actions at contaminated sites.

Aquifer - A subsurface geologic formation which contains and transmits significant amounts of underground water.

Biodegrade - To break down into simpler chemical constituents, through biological processes.

Chromated copper arsenate (CCA) - A

wood preserving compound consisting of copper, chromium, oxygen and arsenic, applied under pressure to impregnate and preserve lumber.

Creosote - A tarry, organic wood preserving compound, derived from distillation of coal tars and most commonly used to protect manufactured wood products such as telephone poles and railroad ties.

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) - A federal law passed in 1980 granting the EPA the authority to investigate and clean up uncontrolled and/or abandoned hazardous waste sites, using money obtained from the Superfund Trust Fund and/or legal action against parties responsible for the pollution.

Dioxins - A class of organic chemicals derived from chlorination of phenols; a transformation product of PCBs, furans, and pentachlorophenol; considered highly toxic.

Expanded Site Inspection - The final stage of federally-funded site assessment, undertaken to identify potential NPL sites, using stringent sampling protocol and documentation

Groundwater Water which exists beneath the earth's surface and migrates through openings in soil and bedrock; often a principal drinking water source.

Groundwater Monitoring Well - A test well, generally of small diameter and specified depth, installed into an aquifer to measure and sample groundwater.

Hazardous Waste Landfill - An engineered, permitted facility, constructed to contain and secure hazardous waste chemicals, or material containing such chemicals, against human exposure or migration to groundwater or the environment.

Information Repository - A designated storage place, typically in a library or courthouse, in which the public can access file information pertaining to site investigation and cleanup.

Landfarming - A method of treating organic soil contaminants, in which affected soils are applied to the land surface, fertilized, and tilled to encourage natural biodegradation of contaminants by existing soil organisms.

Memorandum of Agreement - An agreement between EPA and the state granting authority to the state to conduct environmental investigation, and compel and oversee environmental remedial actions.

National Priorities List (NPL) - The EPA's list of top-priority hazardous waste sites eligible for Federally funded investigation and cleanup under the Superfund Program.

Pentachlorophenol - An organic wood preserving compound composed of (phenolic) carbon, chlorine and hydrogen, generally applied using diesel fuel as a carrier.

Polynuclear Aromatic Compounds - Large organic molecules (composed of 3 or more interconnected benzene ring structures) common in creosote. Several of these compounds are known or suspected to cause cancer.

Potentially Responsible Parties - A person or entity identified as a past or current owner or operator of a site where hazardous substances are known to have been released.

Record of Decision - Documentation of the selection of a preferred remedy for cleanup of a hazardous waste site, based on cost and effectiveness.

Remedial Action - The physical process of cleaning up a hazardous waste site.

Remedial Design - The design of the proposed remediation system used to clean up contamination which usually includes a treatability study.

Remedial Investigation/Feasibility Study - Post-assessment investigation of a hazardous waste site to determine the full nature and extent of contamination, the hazard posed to the human population and the environment, and the evaluation of various cleanup options for the site.

Site Assessment Process - The process of screening, investigating, and prioritizing hazardous waste sites as candidates for inclusion on the EPA's National Priorities List.

Site Inspection Prioritization (SIP) - A Federally funded, pre-remedial environmental site assessment, undertaken to evaluate potential NPL-candidate sites by updating information and/or analytical data from previous site assessments, for use in the Hazard Ranking System.

State Deferral - An agreement under which EPA defers consideration of sites for NPL listing while states compel and oversee remedial actions conducted and funded by potentially responsible parties.

Superfund Amendment and Reauthorization Act of 1986 (SARA) - A federal law passed in 1986, reauthorizing the CERCLA process with new provisions, and modifications to existing provisions

Tidal Estuary - Portion of a coastal river influenced by ocean tides and containing mixed fresh and salt water. Often a major breeding place for fresh and salt water organisms.

Water Table Aquifer - A water-bearing geologic unit, composed of soil and/or rock, where groundwater exists in equilibrium with atmospheric pressure and is not confined by any overlying stratum of less permeable material.

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT

April 20, 2000

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

WILLIAM L. MEYER
DIRECTOR

Mr. William Arrants,
Manager of Environmental
Affairs / Regulatory Compliance
Southern Wood Piedmont Co.
P.O. 5447
Spartanburg, South Carolina 29304

Re: Draft Supplemental RI Workplan,
Southern Wood Piedmont - Wilmington Site
NCD 058 517 467

Dear Mr. Arrants:

We have reviewed your response to our comments on SWP's draft RI Workplan. Based on this review, and our recent conference call on the subject, we concur with your comments and direct you to commence revision of the RI workplan accordingly. Additional comments are limited to the following:

- 1) The Superfund Section's Federal Remediation Branch and Inactive Hazardous Sites Branch both concur that Groundwater Remediation Goals are sufficient criteria to define the extent of groundwater impact at the site. We note that resampling of the wells will include bedrock monitoring well MW-36, which has exceeded Remediation Goals on at least one occasion.
- 2) Southern Wood Piedmont will coordinate directly with NCDENR, Environmental Sciences Branch, as indicated, regarding risk assessment and RI sampling issues, particularly with regard to fish tissue sampling. The Superfund Section will also maintain communication with ESB, and contact other agencies in an attempt to clarify the availability of non-lethal (electroshock) fish collection methodology.



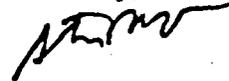
1646 MAIL SERVICE CENTER, RALEIGH, NORTH CAROLINA 27609-1646
401 OBERLIN ROAD, SUITE 150, RALEIGH, NC 27605
PHONE 919-723-4896 FAX 919-715-3605

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER - 50% RECYCLED/10% POST-CONSUMER PAPER

Mr. Arrants
April 20, 2000
Page. 2

SWP is directed to submit the revised Supplemental RI Workplan within 30 days of receipt of this letter. If you have any questions or scheduling concerns, please contact me at (919) 733-2801.

Sincerely,



Stuart F. Parker, Jr.
Hydrogeologist
NC Superfund Section

cc: Gregory Kuntz, Schnabel Engineering
Dan LaMontagne, NC Superfund Section
Luis Flores, US EPA Region IV
Layton Bedsole, NC Ports Authority

File

Division of Water Quality

April 13, 2000

MEMORANDUM

To: Stuart Parker, DWM, Superfund Section
Through: Matt Matthews
From: Sandy Mort, DWQ ESB
Subject: Response to comments
Deferral Remedial Investigation
Southern Wood Piedmont – Wilmington
SWP response to Superfund & ESB comment on
Draft Supplemental RI Workplan
And
Comments – Assessment and sampling methodologies, SLERA, 1996

RECEIVED
APR 18 2000
SUPERFUND SECTION

Response to comments, Deferral Remedial Investigation

SWP's response to NCDENR's comments of February 4, 2000 were received on April 13, 2000. All responses to ESB's comments regarding the RI workplan, fish tissue sampling, SLERA and toxicity testing are considered adequate and appropriate.

Additional comment/clarification is provided for Bullet #2, page 11, Summary of SLERA (draft, 10/8/99):

- Refer to referenced USEPA documents for appropriate toxicity testing organisms for RA purposes:
<http://www.epa.gov/superfund/programs/risk/ecoup/v2no2.pdf>
<http://www.epa.gov/superfund/programs/risk/ecoup/v2no1.pdf>
- Leptocheirus plumulosus*, although not identified in the above referenced documents, would currently be considered a "standardized" toxicity testing organism, and may be acceptable under appropriate site characteristics, exposure and contaminant fate scenarios.

Assessment and sampling methodologies, SLERA, 1996

Section 2.2.1.1 & 2.2.1.2 (page 2-4)

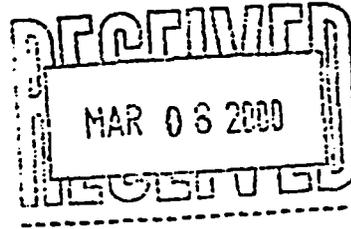
- Were organic samples collected with no headspace in the containers?
- Were AVS/SEM samples maintained under anaerobic conditions to prevent alteration of metal-complexes?

cc: Mark Hale, DWQ ESB



Southern Wood Piedmont Company

March 6, 2000



Mr. Stuart F. Parker, Jr.
Hydrogeologist
NC Superfund Section
Division of Waste Management
NC Department of Environment and Natural Resources
401 Oberlin Road, Suite 150
Raleigh, NC 27605

**RE: Response to Comments on NCDENR February 4, 2000
Letter on Draft Supplemental RI Workplan
Southern Wood Piedmont - Wilmington Site
NCD 058 517 467
Schnabel Project #979007.A.18**

Dear Mr. Parker,

Schnabel Engineering Associates, Inc. and Southern Wood Piedmont (SWP) are pleased to respond to the February 4, 2000 letter from NCDENR concerning the October 1999 Draft Supplemental RI Workplan. After detailed review of the comments, we feel that it would be best to respond to the comments in letter format instead of preparing a revised Supplemental RI Workplan at this time. The revised Supplemental RI Workplan will be completed following NCDENR review of this response letter. In our telephone conversation with NCDENR on February 23, 2000 it was confirmed that this would be an acceptable approach.

RESPONSE TO COMMENTS

A response to each comment is provided below. The response follows the order listed in the February 4, 2000 comment letter from NCDENR.

Page 2. Unresolved Groundwater Issues

- Bullet 1 An upper sand monitoring well will be installed adjacent to MW-11 that is screened to the top of the peat to evaluate accumulation/pumpability of product. See Figure 1 for the proposed well location.

- Bullet 2** An upper sand monitoring well will be installed adjacent to MW-12 that is screened to the top of the peat (Figure 1).
- Bullet 3** A review of boring log information has indicated that installing a lower sand monitoring well adjacent to MW-14A to define the DNAPL extent at the base of this aquifer is not necessary (Figure 1). The attached boring log for monitoring well MW-14A indicates that no free phase constituents are present at this location. As indicated on the boring log, only a slight odor was observed. The organic vapor analyzer (OVA) indicated a decreasing trend in measured organic vapors from the top of the lower sand immediately beneath the peat toward the base of the lower sand.
- Bullet 4** A double cased lower sand monitoring well will be installed adjacent to MW-26 that is screened on top of the lower clay (Figure 1). The surface casing will be completed into the peat layer.
- Bullet 5** Direct push cores (approximately 36) will be completed on 100-foot centers in the vicinity of MW-11, MW-12, MW-14, MW-22 and MW-26 (Figure 1). The direct push cores will be obtained using a Geoprobe rig north and west of MW-26. In the wetland area east and south of MW-26 the use of a manually operated direct push coring device will be required. The cores will be described for the presence and absence of DNAPL, the pumpability of the DNAPL and the depth to the top of the peat. The ground surface elevation and horizontal position of each direct push borehole will be surveyed. The elevation of the top of the peat will be plotted on a plan map to evaluate the direction of potential DNAPL migration and pooling in this area.
- Bullet 6** The data generated by Bullets 1 through 5 will be used to evaluate the quantities and extent of DNAPL within both sand units on site.
- Bullet 7** Black and Veatch did not sample MW-30 during the ESI. The most recent data collected from MW-30 (2/27/98) indicated that all SVOC's were below laboratory detection limits. In our opinion the groundwater impact extent in the upper sand has been defined in this area.

Along with the ESI sampling results, SWP's data also indicated exceedance of remedial goals in the upper sand at MW-34 adjacent to Greenfield Creek.

Along with the ESI, SWP's groundwater sampling results also indicated exceedance of remedial goals in the lower sand at MW-29A.

Bedrock well MW-33 has detected SVOC constituents, however, all detected constituents are below the preliminary remediation goals for the site. As such, the extent of groundwater impact has been defined in this area.

Bedrock well MW-36 was below the preliminary remediation goals for all constituents during the ESI sampling event. During SWP's most recent sampling event 2-methylnaphthalene and naphthalene were detected at concentrations that exceeded their preliminary remediation goals.

To evaluate these concerns all wells at the site will be resampled for previously detected constituents. Water levels will be collected from all wells at various times through a full tidal cycle to evaluate the effect that the new tidal gate has on the groundwater flow.

Pactank environmental representatives will be contacted to determine if they have generated groundwater data which might be used to further characterize the groundwater conditions south of Greenfield Creek. If wells are present on their facility, it will be requested that SWP be allowed to measure groundwater levels in these wells to evaluate the direction of groundwater flow south of Greenfield Creek. The water level in these wells will be measured across a full tidal cycle with the on-site wells.

Staff gauges will be installed along Greenfield Creek and surveyed to aid in the evaluation of groundwater flow relative to Greenfield Creek.

Page 3

Bullet 8

Subsurface soil samples will be collected at locations where surface soils indicated dioxin/furan results that exceed remediation goals at the site. The subsurface soils will be collected at a depth greater than 2 feet below land surface but above the water table and analyzed for dioxin/furans. Subsurface soil samples will be collected at the following locations (Figure 2):

SS-13 Exceeded remediation goal for OCDD and OCDF
SS-17 Exceeded remediation goal for OCDD and OCDF
SS-06 Exceeded State Remediation Goal
SS-14 Exceeded State Remediation Goal
SS-2 Background sample

Groundwater samples will be collected at locations where surface soils indicated dioxin/furan results that exceed remediation goals at the site. The groundwater samples will be collected using low-flow (minimal drawdown) technology to minimize collecting suspended particles in the samples and sampled for dioxins/furans. Groundwater samples will be collected at the following locations (Figure 1):

MW-12 Production Area
MW-14 Covered Ditch
MW-34 Greenfield Creek Area
MW-40 Landfarm Area
MW-17 Background

Page 3, Section B-Additional Remedial Investigation Activities

Bullet 1 . . . DNAPL delineation is required in the vicinity of the covered ditch, production area and the large storage tank area. Please refer to Figure 1.

Direct push cores are recommended to define the pumpable DNAPL areal extent in the upper sand. As previously stated in Bullet 5 on Page 2 of this letter, direct push cores will be collected on 100-foot centers in the vicinity of the covered ditch, the production area and the large storage tank area.

Since DNAPL migration should be vertically downward from the upper sand to the lower sand, double cased wells will be installed in the lower sand directly beneath areas of pumpable free product accumulation in the upper sand completed on top of the next low-permeability stratum (i.e. lower clay).

Following DNAPL delineation, a product recovery test will be performed adjacent to MW-26 to determine the physical condition and mobility of the product. A larger diameter (6-inch) well may be required at MW-26 to perform the product recovery test.

Bullet 2 Please refer to Bullet 8 on page 3 of this letter.

Bullet 3. It is suggested that three additional sediment samples (SD-36, SD-37 and SD-38) be collected in the vicinity of SD-14 (Figure 2). One sediment sample (SD-39) will be collected in an off-site wetland area for background comparison. The samples will be analyzed for previously detected constituents.

Bullet 4 Both Amerada Hess and Paktank environmental representatives will be contacted to determine whether these facilities have generated groundwater data which might be used to further characterize groundwater conditions at the site.

Page 4, Part II-Technical Comments Specific to Draft RI Workplan**Section 3.2.1-Sediment Sampling**

Bullet 1 Reference sample SD-01 will not be collected due to the large amount of wind-blown paper and other solid waste in the drainage ditch. An attempt to find a suitable alternate location will be made. If no other suitable ditch reference sample can be located, the reference sample at BK-S1 below the dam at Greenfield Lake will be used for both the ditch and the creek (Figure 2).

SS-10A will be resampled for dioxins/furans instead of SD-09 (Figure 2).

The Cape Fear reference location will be located 500 feet north of the northern drainage ditch (Figure 2).

- SS-19 and SS-21 will be resampled for dioxins/furans instead of SD-11 (Figure 2).
- Bullet 2 It is correct that fish tissue sampling will not occur until after the Phase I dioxin/furan sediment samples have been reviewed. This is because if dioxins/furans are detected in the sediment samples then the fish will also be sampled for dioxins/furans.
- Bullet 3 Sediment sampling will occur as proposed on a 200-foot spacing to delineate "hot" segments of the creek and ditch system.
- Bullet 4 The reference sample on Greenfield Creek will be collected as far upstream from the railroad bridge as possible.

Page 4, Table 1-Sample Identification

- Bullet 1 See Bullet 1 Section 3.2.1-Sediment Sampling on Page 4 of this letter.
- Bullet 2 See Bullet 1 Section 3.2.1-Sediment Sampling on Page 4 of this letter.
- Bullet 3 See Bullet 1 Section 3.2.1-Sediment Sampling on Page 4 of this letter.
- Bullet 4 See Bullet 1 Section 3.2.1-Sediment Sampling on Page 4 of this letter.
- Bullet 5 Reference fish tissue samples will be collected from Greenfield Lake and from a separate Cape Fear River tributary similar to Greenfield Creek but less likely to be contaminated by site constituents. Barnard's Creek downstream of the site and Smith's Creek upstream of the site will be evaluated for potential reference fish samples that are similar to Greenfield Creek. Both creeks drain populated areas of Wilmington. If these creeks are not satisfactory, additional creeks on the west bank of the Cape Fear River will be explored. We will obtain NCDENR concurrence prior to sampling the selected reference creek.

Page 5, Human Health/Ecological Risk Assessment

- Bullet 1 *Hyalella azteca* will be used for the chronic ecotoxicity studies. While NCDENR did not comment on our proposed use of *Chironomus* as the second chronic toxicity test specie, it is our belief that it would be preferable to secure toxicity test results from two organisms for weight of evidence considerations. This will help to minimize uncertainty of test results.
- Bullet 2 In addition to the NC Division of Water Quality providing oversight, we would like to evaluate the possibility of utilizing their personnel and equipment to collect the fish.

Bullet 3 No response required.

Page 5, Data Quality Objectives

Bullet 1 No response required.

Page 6, Section 3.2.3 Fish Tissue Sampling

Bullet 1 We will contact Mark Hale of ESB (919-733-6946) and follow ESB/DENR procedures when assessing potential human health impacts.

Bullet 2 The procedures utilized during this study will reference USEPA documents.

Bullet 3 NCDENR commented that "3 trophic levels of fish are recommended for sampling, with fish of similar size and weight, used for compositing." It should be recognized that, while every attempt will be made to capture 3 trophic levels of fish in Greenfield Creek and in the Drainage Ditch, it is unlikely that this many trophic levels are present as resident species in this system. Because a Department representative will be present during the electroshock collections, they will be able to see first hand the degree of actual specie diversity.

Bullet 4 Similarly, the Department commented that "Selected fish species should mirror those typically caught by recreational anglers." Again, to the extent that such species are present and can be collected using electroshock techniques from this system, the State's recommendation will be completed.

Bullet 5 This will be a goal of the fish sampling procedures.

Bullet 6 Agree, but how does this relate to the earlier reference area comment concerning Greenfield Lake? If the lake is used as a background sampling location, then the types and sizes of the fish caught there may not be comparable to Greenfield Creek.

Bullet 7 Agree, but may be a necessity. Additional composite samples will be collected, if possible.

Page 6, Summary SLERA

Bullet 1 The Department's recommendations concerning the collection of AVS/SEM sampling data are prudent. The NC ESB personnel will be consulted on the appropriate sample collection/handling techniques as well as the analytical procedures utilized.

Bullet 2 In late 1995 to early 1996, a ChemRisk ecologist performed a limited survey of benthic macroinvertebrates in the Ditch/Creek system for the purpose of qualitatively examining the composition of the local infaunal community. The

Department's cautionary guidance regarding the use of standardized toxicity testing methods and selection of laboratories pertaining to organism toxicity testing is prudent. At the time the limited survey was completed ChemRisk was unaware of any requirements for certification to perform this work in North Carolina. Appropriate methods at the time were employed. Review of this data presented in the SLERA by ESB personnel is recommended to evaluate the acceptability of the data by NCDENR.

Bullet 3 Agree. No response is required.

Page 9, Analytical Database

Bullet 1 The majority of the pre-1990 through 1992 data was collected by NC selected consultants completing Preliminary Assessments and Site Screening Investigations for the State. It is assumed that the consultants would have used data validated to the standards at the time. We don't agree with the qualitative comment unless the analytical methods or QC data were questionable.

Bullet 2 Agreed, ASTM methods will be used. Specific methods are listed in the existing workplan. We will get the selected laboratory to submit a QA/QC plan with the revised workplan. NCDENR can audit the laboratory to obtain a greater comfort level, if necessary.

Page 10, Composite Samples for Toxicity Testing

Bullet 1 Agree.

Page 11, Identification of Receptors

Bullet 1 Piscivorous avian species (blue heron) was used as the terrestrial endpoint receptor. Other terrestrial receptors were not considered since the emphasis was the creek/ditch system.

Page 11, Assessment Endpoint No. 1, Corresponding Measurement Endpoints

Bullet 1 Agreed, but how does this relate to the *Hyalella* comment on Page 5 Bullet 1 of the NCDENR response letter?

SWP and Schnabel Engineering Associates appreciates NCDENR willingness to review our response to NCDENR comments prior to preparing the revised Supplemental RI Workplan. We will be glad to further discuss our responses with NCDENR via a conference call at your convenience.

Sincerely,



W. P. Arrants

Manager of Environmental Affairs/
Regulatory Compliance

CC: G. B. Kuntz - Schnabel
M. D. Pruett

4382bw



ENVIRONMENTAL TECHNOLOGY ENGINEERING, INC.
CONSULTING ENGINEERS, SURVEYORS AND HYDROGEOLOGISTS
HYDROGEOLOGIC SERVICES

TEST BORING LOG
BORING NO. MW-14

PROJECT: SOUTHERN WOOD PIEDMONT-WILMINGTON

SHEET NO. 1 OF 1

CLIENT: T.M. DAVIS

DATE FINISHED 11-2-83

JOB NO. 12-53015'

BORING CONTRACTOR: ETE

DRILLER LAYNE ENVIRONMENTAL

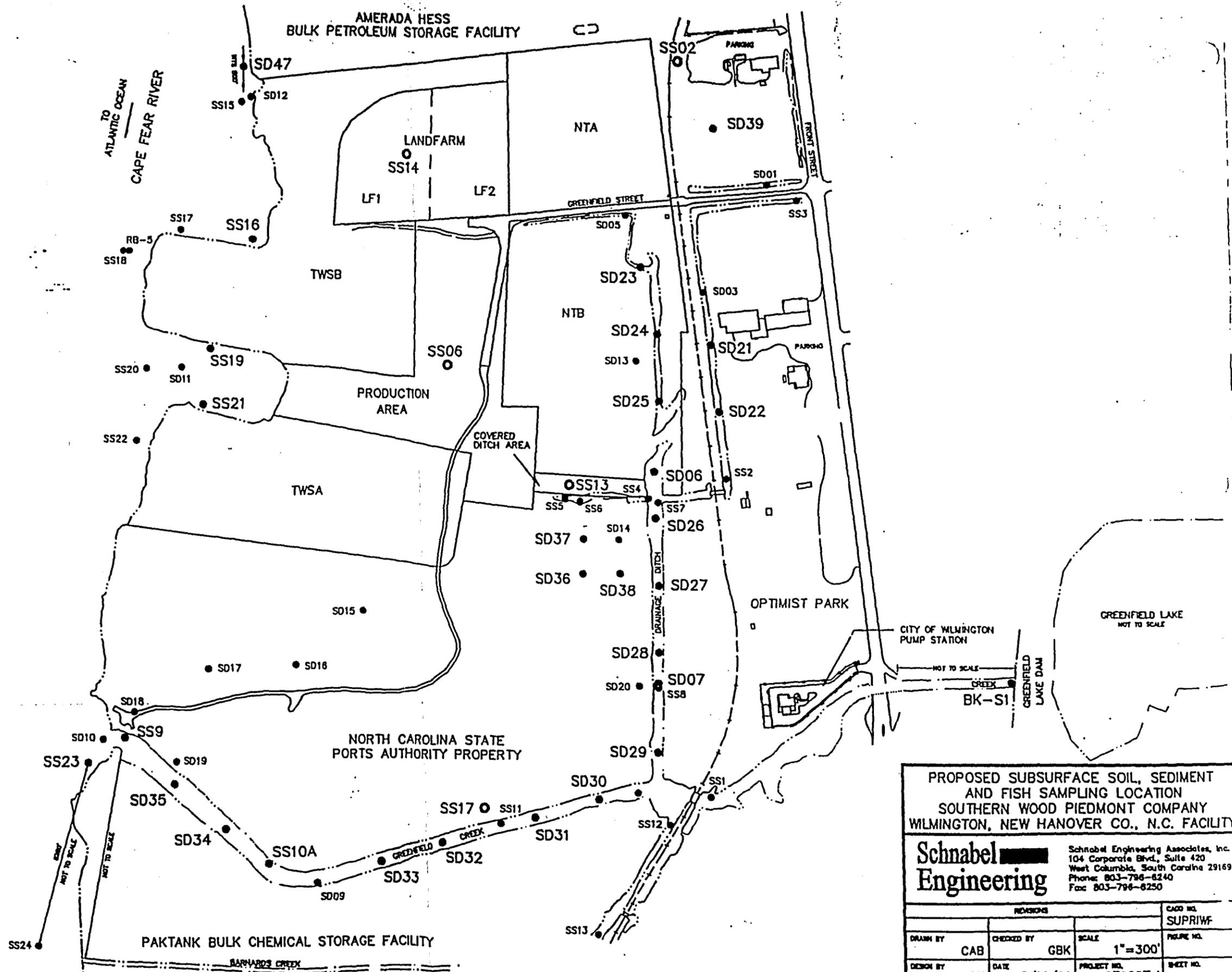
ELEVATION

RIG USED ATV MUD ROTARY

INSPECTOR G. KUNTZ

DATE STARTED 10-27-

WELL CONSTRUCTION	DEPTH FEET	SAMPLE			CLASSIFICATION	REMARKS
		NO.	TYPE	BLOWS PER FT.		
6" PVC 2" PVC 6" PVC GROUT GROUT CLAY PLUG SAND PACK SAND PACK	0	1	PH		Loose, brown SAND, fine to coarse, coarse dominant, fill, trace granule	No odor OVA = 26.1 ppm
	2	PH		Loose, brown SAND, very fine to coarse, medium dominant. Visual staining @ 3'.	Strong odor OVA = 94.3 ppm	
	3	SS	2-8 1-3	Very loose, brown SAND and PEAT, 50% peat, 3' wood fragment. Visual staining.	6" recovery Strong odor OVA = 88.3 ppm	
	4	SS	2-1 1-3	Very loose, brown SAND, fine to coarse to 7.5', then dark brown CLAY. Visual staining in sand.	14" recovery Strong odor OVA = 149 ppm	
	5	SS	1-1 1-1	Very soft, dark brown CLAY to 8.5', then dark brown PEAT	18" recovery Moderate odor OVA = 85.3 ppm	
	6	SS	1-1 1-1	Very soft, dark brown clayey PEAT, 30% clay	24" recovery Slight odor OVA = 89.5 ppm	
	7	SS	1-1 1-1	Very soft, dark brown peaty CLAY, 50% peat	24" recovery Very slight odor OVA = 82.8 ppm	
	8	SS	1-1 3-5	Firm, dark brown peaty CLAY, 35% peat Pit casing to 16'	18" recovery Very slight odor OVA = 65.1	
	9	SS	1-1 1-3	Soft, brownish black peaty CLAY, 25% peat	4" recovery Moderate odor OVA = 116 ppm	
	10	SS	2-2 2-4	Firm, same as above. Slight sheen in drilling mud.	4" recovery Moderate odor OVA = 88.1 ppm	
	11	SS	3-1 1-2	Soft, same as above. Sheen in drilling mud.	2" recovery Moderate odor OVA = 107 ppm	
	12	SS	2-2 3-5	Firm, brownish black peaty CLAY, 50% peat. Little visual staining.	18" recovery Moderate odor OVA = 137 ppm	
	13	SS	3-2 2-3	Loose, brown SAND, fine to coarse, 5% very coarse, trace wood.	18" recovery Moderate odor OVA = 447 ppm	
	14	SS	4-5 5-6	Firm, same as above.	18" recovery Moderate odor OVA = 69.4 ppm	
	15	SS	2-1 3-5	Loose, brown SAND, fine to granule, 5% granule to small pebble	18" recovery Slight odor OVA = 62.0 ppm	
	16	SS	3-6 6-6	Firm, brown SAND, fine to coarse, well sorted medium	12" recovery Slight odor OVA = 28.5 ppm	
	17	SS	3-7 6-8	Firm, same sand as above to 40.5', then olive gray CLAY	24" recovery Slight odor OVA = 27.6 ppm TD = 42'	



LEGEND

- PROPOSED PHASE I DIOXIN/FURAN SEDIMENT SAMPLE LOCATION (10)
- PROPOSED SEDIMENT SAMPLE LOCATION (19)
- PROPOSED DIOXIN/FURAN SUBSURFACE SOIL SAMPLE LOCATION (5)
- PROPOSED GREENFIELD CREEK & DRAINAGE DITCH FISH TISSUE SAMPLE LOCATIONS

GRAPHIC SCALE



1 inch = 300 ft.

PROPOSED SUBSURFACE SOIL, SEDIMENT AND FISH SAMPLING LOCATION
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

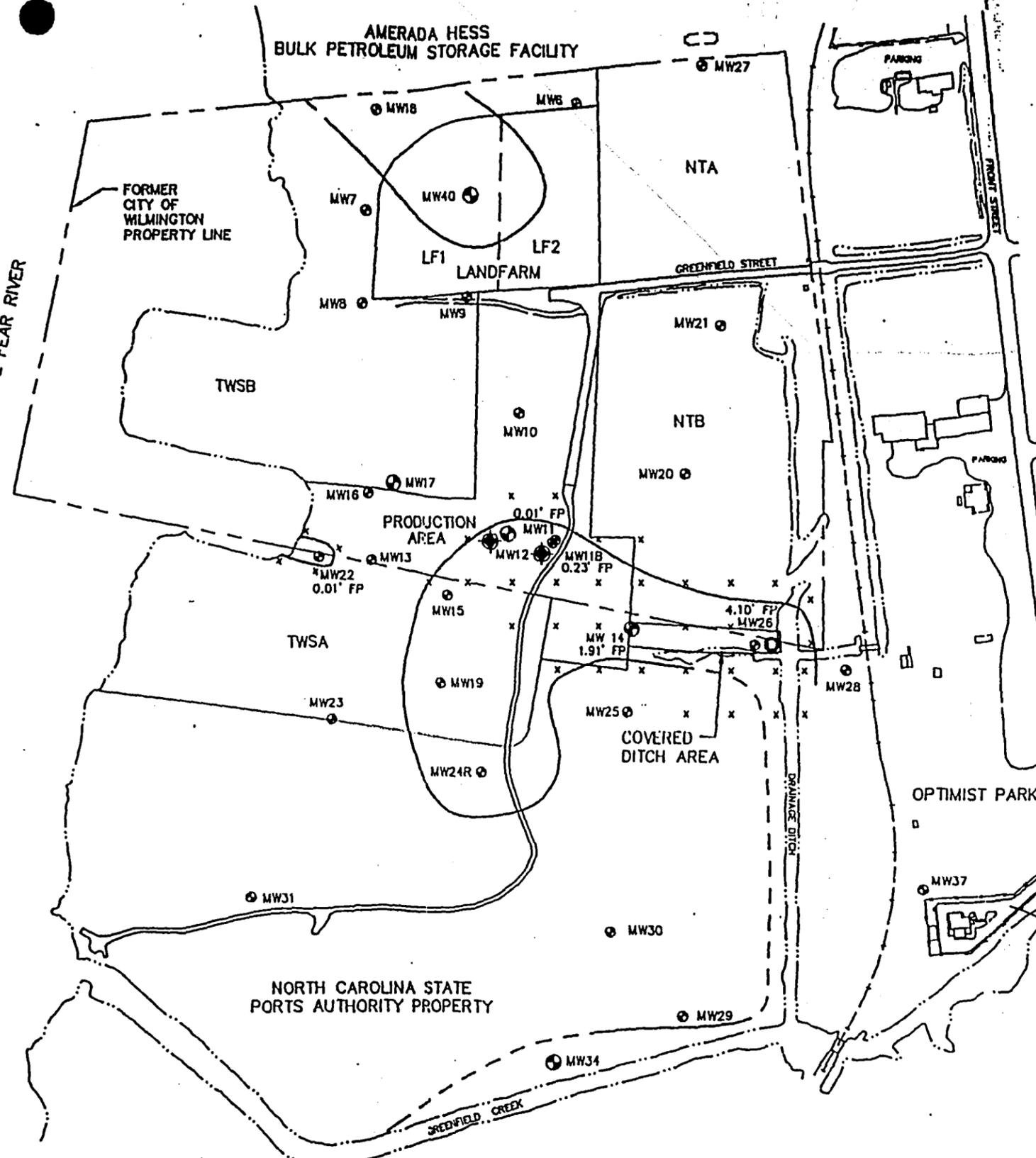
Schnabel Engineering

Schnabel Engineering Associates, Inc.
104 Corporate Blvd., Suite 420
West Columbia, South Carolina 29169
Phone: 803-796-8240
Fax: 803-796-8250

REVISIONS			CADD NO.
DESIGNED BY	CAB	CHECKED BY	GBK
SCALE	1" = 300'		FIGURE NO.
DATE	2/18/00		PROJECT NO.
DESIGN BY	GBK	PROJECT NO.	979007.A
			SHEET NO.
			2

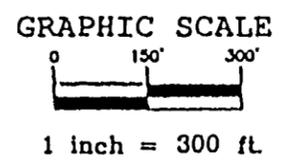
TO ATLANTIC OCEAN
CAPE FEAR RIVER

AMERADA HESS
BULK PETROLEUM STORAGE FACILITY



LEGEND

- ⊙ EXISTING MONITORING WELLS (29)
- REMEDIATION GOAL DELINEATION LINE
- FP FREE PRODUCT (IL.)
- GROUNDWATER DATA COLLECTED FEBRUARY 26 & 27, 1998.
- X PROPOSED DIRECT PUSH CORE LOCATION (36)
- ◆ PROPOSED UPPER SAND DNAPL WELL (2)
- PROPOSED LOWER SAND DNAPL WELL (1)
- ⊙ PROPOSED DIOXIN/FURAN GROUNDWATER SAMPLE LOCATION



PROPOSED DNAPL DELINEATION AND
MONITORING WELL LOCATION MAP
SOUTHERN WOOD PIEDMONT COMPANY
WILMINGTON, NEW HANOVER CO., N.C. FACILITY

Schnabel Engineering
Schnabel Engineering Associates, Inc.
104 Corporate Blvd., Suite 420
West Columbia, South Carolina 29169
Phone: 803-798-8240
Fax: 803-798-8250

REVISIONS			CADD NO. Supriwpdnapl
DRAWN BY CAB	CHECKED BY GBK	SCALE 1"=300'	FIGURE NO. 1
DESIGN BY GBK	DATE 3/3/00	PROJECT NO. 979007.A	SHEET NO.

PAKTANK BULK CHEMICAL STORAGE FACILITY

NORTH CAROLINA STATE
PORTS AUTHORITY PROPERTY

OPTIMIST PARK

CITY OF WILMINGTON
PUMP STATION

GREENFIELD STREET

DRAINAGE DITCH

GREENFIELD CREEK

MW27

NTA

MW21

NTB

MW20

PRODUCTION AREA

MW22
0.01' FP

TWSA

MW14
1.91' FP

MW25

COVERED DITCH AREA

MW26
4.10' FP

MW28

MW31

MW30

MW29

MW34

MW37

MW18

MW7

MW8

MW16

MW13

MW15

MW19

MW24R

MW6

MW40

LF1

LF2

LANDFARM

MW9

MW10

MW17

MW12

MW11B
0.23' FP

MW11

MW12

MW11A

MW11C

MW11D

MW11E

MW11F

MW11G

MW11H

MW11I

MW11J

MW11K

MW11L

MW11M

MW11N

MW11O

MW11P

MW11Q

MW11R

MW11S

MW11T

MW11U

MW11V

MW11W

MW11X

MW11Y

MW11Z

MW11AA

MW11AB

MW11AC

MW11AD

MW11AE

MW11AF

MW11AG

MW11AH

MW11AI

MW11AJ

MW11AK

MW11AL

MW11AM

MW11AN

MW11AO

MW11AP

MW11AQ

MW11AR

MW11AS

MW11AT

MW11AU

MW11AV

MW11AW

MW11AX

MW11AY

MW11AZ

MW11BA

MW11BB

MW11BC

MW11BD

MW11BE

MW11BF

MW11BG

MW11BH

MW11BI

MW11BJ

MW11BK

MW11BL

MW11BM

MW11BN

MW11BO

MW11BP

MW11BQ

MW11BR

MW11BS

MW11BT

MW11BU

MW11BV

MW11BW

MW11BX

MW11BY

MW11BZ

MW11CA

MW11CB

MW11CC

MW11CD

MW11CE

MW11CF

MW11CG

MW11CH

MW11CI

MW11CJ

MW11CK

MW11CL

MW11CM

MW11CN

MW11CO

MW11CP

MW11CQ

MW11CR

MW11CS

MW11CT

MW11CU

MW11CV

MW11CW

MW11CX

MW11CY

MW11CZ

MW11DA

MW11DB

MW11DC

MW11DD

MW11DE

MW11DF

MW11DG

MW11DH

MW11DI

MW11DJ

MW11DK

MW11DL

MW11DM

MW11DN

MW11DO

MW11DP

MW11DQ

MW11DR

MW11DS

MW11DT

MW11DU

MW11DV

MW11DW

MW11DX

MW11DY

MW11DZ

MW11EA

MW11EB

MW11EC

MW11ED

MW11EE

MW11EF

MW11EG

MW11EH

MW11EI

MW11EJ

MW11EK

MW11EL

MW11EM

MW11EN

MW11EO

MW11EP

MW11EQ

MW11ER

MW11ES

MW11ET

MW11EU

MW11EV

MW11EW

MW11EX

MW11EY

MW11EZ

MW11FA

MW11FB

MW11FC

MW11FD

MW11FE

MW11FF

MW11FG

MW11FH

MW11FI

MW11FJ

MW11FK

MW11FL

MW11FM

MW11FN

MW11FO

MW11FP

MW11FQ

MW11FR

MW11FS

MW11FT

MW11FU

MW11FV

MW11FW

MW11FX

MW11FY

MW11FZ

MW11GA

MW11GB

MW11GC

MW11GD

MW11GE

MW11GF

MW11GG

MW11GH

MW11GI

MW11GJ

MW11GK

MW11GL

MW11GM

MW11GN

MW11GO

MW11GP

MW11GQ

MW11GR

MW11GS

MW11GT

MW11GU

MW11GV

MW11GW

MW11GX

MW11GY

MW11GZ

MW11HA

MW11HB

MW11HC

MW11HD

MW11HE

MW11HF

MW11HG

MW11HH

MW11HI

MW11HJ



NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF WASTE MANAGEMENT

February 4, 2000

RECEIVED

FEB 18 2000

SOUTHERN WOOD PIEDMONT

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

WILLIAM L. MEYER
DIRECTOR

Mr. William Arrants,
Manager of Environmental
Affairs / Regulatory Compliance
Southern Wood Piedmont Co.
P.O. 5447
Spartanburg, South Carolina 29304

Re: Review and Comment on October 1999
Draft Supplemental RI Workplan,
Southern Wood Piedmont - Wilmington Site
NCD 058 517 467

Dear Mr. Arrants:

Thank you for your patience during our review of the draft Supplemental RI Workplan. The attached comments reflect input from various personnel in the NC Superfund Section, as well as the NC Division of Water Quality and the US EPA Region IV.

Now that the site is moving from Assessment to Remediation, State Applicable Relevant & Appropriate Requirements (ARARs) apply to all contaminated media at the site. For this reason, in addition to surface water pathway concerns, the review and comment contains additional discussion of groundwater conditions at the site, and requirements identified for additional evaluation of this medium during the RI. Compliance requirements and conditions of variance are detailed in NCAC Title 15A, Subchapter 2L, Sections .0106 and .0113



1646 MAIL SERVICE CENTER, RALEIGH, NORTH CAROLINA 27699-1646
401 OBERLIN ROAD, SUITE 150, RALEIGH, NC 27605
PHONE 919-733-4996 FAX 919-715-3605

AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER • 50% RECYCLED/10% POST-CONSUMER PAPER

Mr. Arrants
February 4, 2000
Page. 2

SWP is directed to submit a Revised RI Workplan within 30 days of receipt of the attached comments. If you have any questions or scheduling concerns, please contact me at (919) 733-2801.

Sincerely,



Stuart F. Parker, Jr.
Hydrogeologist
NC Superfund Section

Attachments

cc: Gregory Kuntz, Schnabel Engineering
Dan LaMontagne, NC Superfund Section
Luis Flores, US EPA Region IV
File

Review and Comment on
October 1999 Draft Remedial Investigation Workplan
Southern Wood Piedmont Site
Wilmington, New Hanover County, NC
NCD 058 517 467

Stuart F. Parker
NC Superfund Section
January 2000

PART I: CLARIFICATION OF GROUNDWATER REQUIREMENTS

Summary of Groundwater Conditions:

Due to a limited number of groundwater receptors, groundwater contamination was not identified as a priority concern at this site during federal Site Assessment. However, the promulgated State of North Carolina Administrative Code, Title 15A, Subchapter 2L, requires that any contaminated groundwater in NC be restored to state standards to the extent that is technologically and economically feasible. This ARAR applies to State-deferred sites as well as to NPL-listed sites. Groundwater contamination at the Southern Wood Piedmont - Wilmington site must be thoroughly characterized prior to consideration of groundwater remedial alternatives.

Southern Wood Piedmont's contractors have performed extensive groundwater investigations to date at the Wilmington site, installing approximately thirty-six monitoring wells during 1992-1993. The US EPA, Region IV installed twelve additional monitoring wells during the 1997 Expanded Site Inspection (ESI). Subsurface explorations have delineated an upper sand aquifer unit and a lower sand aquifer unit, separated from one another by a semi-permeable peaty clay layer. Between these surficial units and the underlying bedrock aquifer is a low-permeability clay layer, however, this clay layer is discontinuous beneath the southernmost portions of the site.

Dense non-aqueous phase liquid (DNAPL) creosote has accumulated within the upper sand and peaty clay and has more recently been detected in the lower sand unit. Groundwater in both sand units contains semi-volatile organic compounds (SVOCs) exceeding state groundwater standards. At the south end of the site, where the lower sand unit contacts bedrock, SVOCs have also been detected in bedrock monitoring wells.

Unresolved Groundwater Issues:

The NC Superfund Section, Site Evaluation and Removal Branch has reviewed the geologic data summarized in the 1996 Phase III Groundwater Quality Assessment, the July 1997 Expanded Site Inspection and the June 1999 draft Remedial Investigation. As recommended by US EPA Region IV, the NC Superfund Section's Federal Remediation Branch assisted in identifying additional data requirements for completion of the Remedial Investigation. The NC Superfund Section has the following comments regarding the status of groundwater investigation at the site:

1. Although no DNAPL has been reported in upper sand monitoring well MW-11, the well screen is set approximately 5 ft above the top of the peaty clay layer. However, the boring log reported creosote saturation beneath the screened interval, indicating potential DNAPL accumulation there. DNAPL has also been detected at MW-11B, within the lower sand unit.
2. The boring log and screen depth interval for MW-12 do not preclude the presence of DNAPL at this location within the upper sand aquifer.
3. No DNAPL has been detected in the lower sand unit at MW-14A. However, this well screen also has been placed too high to detect the presence or migration of DNAPL.
4. Measured DNAPL thickness in the upper sand unit is greatest at MW-26. However, no exploration or well installation has taken place at the corresponding location within the lower sand unit.
5. Within the upper sand unit, no DNAPL was observed in monitoring wells located north and south of MW-14. However, no test borings or wells were completed within several hundred feet north and south of DNAPL well MW-26. Within these unexplored areas, the surface topography of the peaty clay layer may vary from that interpolated from other monitoring well locations (Phase III report). In such an event, additional DNAPL accumulation might have occurred in proximity to the site's eastern property line.
6. The above observations indicate that the quantities and extent of creosote DNAPL within both sand aquifer units are under-represented by existing data.
7. In contrast to SWP's results, ESI sampling detected aqueous SVOCs in upper sand wells MW-30 and MW-34, in lower sand well MW-29A, and in bedrock wells MW-33 and MW-36. These results indicate that the southern limits of the groundwater contaminant plumes have not been fully delineated.

8. During the ESI, polychlorinated dibenzodioxins and dibenzofurans were detected in on-site surface soil samples. Toxicity Equivalent Values (TEQs) exceeded the 1 part-per-billion State Remediation Goal in samples from the Landfarming area and the Production area. Specific dioxin and furan congeners also exceeded Remediation Goals in soil at the Covered Ditch area, and at the extreme south end of the site. No subsurface soil or groundwater samples from the site have been tested for dioxin or furan congeners.

B: ADDITIONAL REMEDIAL INVESTIGATION ACTIVITIES:

1. DNAPL Delineation: The areal extent and thickness of creosote DNAPL in both sand aquifers must be further characterized by subsurface exploration in the periphery of known DNAPL locations. Explorations should further delineate the peaty clay layer's upper surface topography, and provide additional data on the DNAPL's physical condition and mobility. Within the upper sand unit, use of direct-push exploration technology is encouraged in order to maximize coverage while reducing expenses to Southern Wood Piedmont. Exploration of the lower sand unit must not result in additional vertical migration of DNAPL or contaminated groundwater.
2. Groundwater sampling: Although polychlorinated dioxins and furans are relatively immobile in soil, sampling will be necessary to rule them out as site-specific groundwater contaminants. Sampling will be limited to the upper sand wells located closest to the four "hit" surface soils, in the Production area (MW-12), the Covered Ditch area (MW-14), the Landfarm area (MW-40) and adjacent to Greenfield Creek (MW-34). Monitoring well MW-17 will be used as a control sample. Monitoring wells will be purged and sampled using low-flow technology. Strict care must be taken to avoid accidental contamination of the samples. If no elevated dioxin/furan congener concentrations are detected, then no additional groundwater sampling will be required for this class of contaminants.
3. Surface Soil Sampling: Collect additional surface soils near SD-14, in the wetland area south of the Covered Ditch area. Collect off-site background wetland sample(s) for comparison.
4. Obtain Off-site Groundwater Data: Contact Amerada Hess and Paktank environmental representatives to determine whether these facilities have generated groundwater data which might be used to further characterize groundwater conditions at the site.

PART II: TECHNICAL COMMENTS SPECIFIC TO DRAFT RI WORKPLAN:

Section 3.2.1-Sediment Sampling:

1. Sediment resampling for dioxins/furans should be conducted (except for backgrounds) at locations where elevated site contaminants (SVOCs) have previously been detected (See Table 1 comments below).
2. It is inferred from the first paragraph that collection of fish tissue samples will not occur until after sediment dioxin/furan results have been reviewed.
3. Sample spacing of 200 ft is adequate for RI-stage delineation of "hot" segments in the ditch and creek systems.
4. As indicated in the Draft RI Workplan, the Reference (background) sediment sample on Greenfield Creek will be located far upstream of the railroad bridge crossing.

Table 1-Sample identification:

1. Note that large amounts of disposed or wind-blown paper and other solid waste have been observed in the drainage ditch where SD-01-DF is proposed.
2. Resample SS-10A location for dioxins/furans instead of SD-09.
3. Cape Fear reference sediment sample SS-16-DF should be located farther upriver from the slip area, to avoid potential contamination from on site, but not far enough upriver to be contaminated by the Wilmington Coal Gas Plant site.
4. Resample SS-19 or SS-21 location for dioxins/furans instead of SD-11.
5. Because fish are mobile organisms, fish caught anywhere in Greenfield Creek could potentially have been exposed to site contaminants. The Greenfield Lake dam separates the respective creek and lake fish communities. Greenfield Lake does not match the hydrologic characteristics of the drainage ditch and Greenfield Creek, but is the only segment of that drainage where fish aren't potentially contaminated by the site. Reference fish samples (BIO-16, BIO-21) should therefore be collected a) from Greenfield Lake and b) from a separate Cape Fear tributary similar to Greenfield Creek but less likely to be contaminated.

Human Health/Ecological Risk Assessment:

1. Use of *Hyallolella azteca* is considered appropriate by EPA for chronic ecotoxicity studies.
2. NC Division of Water Quality personnel will assist in the oversight of fish tissue collection and will review the ecotoxicity study and risk assessment methodology and results.
3. The NC Division of Water Quality, Environmental Sciences Branch, has reviewed portions of the Draft RI Workplan. Their comments are attached.

Data Quality Objectives:

- 1) The NC Superfund Section's sample quality assurance representative has reviewed Attachment D of the RI Workplan, and concurs that the analytical laboratory's QA program is appropriate for participation in the Remedial Investigation.

Human Health/Ecological Risk Assessment:

1. Use of *Hyallolela azteca* is considered appropriate by EPA for chronic ecotoxicity studies.
2. NC Division of Water Quality personnel will assist in the oversight of fish tissue collection and will review the ecotoxicity study and risk assessment methodology and results.
3. The NC Division of Water Quality, Environmental Sciences Branch, has reviewed portions of the Draft RI Workplan. Their comments are attached.

Data Quality Objectives:

- 1) The NC Superfund Section's sample quality assurance representative has reviewed Attachment D of the RI Workplan, and concurs that the analytical laboratory's QA program is appropriate for participation in the Remedial Investigation.

January 7, 2000

MEMORANDUM

To: Hanna Assefi, DWM
Through: Matt Matthews, ESB *mm*
From: Sandy Mort *SM*
DWQ, ESB

Post-it® Fax Note	7671	Date	1/7	# of pages	2
To	Hanna Assefi	From	Sandy Mort		
Co./Dept.	DWM	Co.			
Phone #		Phone #	733-2136		
Fax #		Fax #			

Subject: Review of Supplemental Remedial Investigation WP
Southern Wood Piedmont Co.
Draft document dated Oct. 8, 1999

Section 3.2.3 Fish Tissue Sampling

- It is recommended that fish tissue sampling follow procedures utilized by ESB/DENR when assessing potential human health impacts. Mark Hale ((919) 733-5345) of ESB may be referenced for appropriate procedural guidelines.
 - ESB utilizes procedures that reference USEPA documents.
 - 3 trophic levels of fish are recommended for sampling, with fish of similar size and weight, used for compositing.
 - Selected fish species should mirror those typically consumed by recreational fisherman. Mark Hale can recommend species for each trophic level. The size of fish should be similar to those typically consumed by recreational fisherman.
 - Individual fish species collected for composites should be of similar size/weight range. A specified number range of individuals should be used for compositing (i.e., 3-5 Individuals/composite).
 - Background areas should mirror the habitat and water quality characteristics of the site sampling locations so as to be affected by similar contaminant fate and transport mechanisms, as well as similar organism exposure characteristics.
 - Single composites from each sampling location may not be adequate to provide reliable data for evaluation.

Summary of SLERA

- Bullet #1:** The use of AVS/SEM is referenced for evaluation of sediment metal toxicity. Although this operationally defined parameter has proven to accurately predict sediment metal toxicity it is very difficult to collect and analyze samples in a manner that does not bias the results. Caution is recommended in the evaluation of this data, with emphasis placed on the review of the sample collection/handling techniques, as well as the analytical procedures utilized. Review of this data should be performed by personnel with a working familiarity of AVS/SEM theory and techniques (ESB personnel).
- Bullet #2:** Reference is made to community composition assessments made for benthic macroinvertebrates in ditch/creek sediments. Who performed this work? Did it follow USEPA/NC DENR protocols? Was the group certified to perform this work in NC?
 - Review of these results by ESB personnel is recommended if the data referenced was not generated by DWQ.
- Bullet #3:** The further investigation of direct contact and ingestion of sediments by benthic invertebrates when HQs exceed 1 is supported.

Page 9, Analytical Database

- Early analytical data (<1990-92) should be evaluated carefully for detection limits (DLs), sample collection and handling techniques, analytical protocols, and QA/QC protocols to insure that it meets current program standards. Any data that does not meet standards may be used qualitatively.
- **Supplemental Field Sampling:** Standardized toxicity test methods (USEPA, ASTM, NCDENR) should be used for all media. Tests should be performed by laboratories well versed and accustomed to this type of testing. State certifications should be in place for applicable toxicity test methods (NCDWQ does not provide certification for sediment toxicity testing). Laboratories with sediment certifications from other states or agencies are recommended, or as an alternative, provide documentation to support a history of method performance.

Page 10, Composite Samples for Toxicity Testing

- Sediment collection and handling methods should reflect current USEPA/ASTM procedures to insure the integrity of the sediment and potential contaminants are retained for toxicity testing.

Page 11, Identification of Receptors

- Have terrestrial receptors been ruled out via exposure pathway? Is there potential for prey on aquatic invertebrates, fish?

Page 11, Assessment Endpoint No. 1, Corresponding Measurement Endpoints

- **Bullet #2:** Organisms used for toxicity testing should be chosen to be representative of species expected to be supported on the site (salinity requirements, habitat type), while maintaining the recommendation of using "standardized" testing procedures.

September 3, 1999



JAMES B. HUNT JR.
GOVERNOR

WAYNE MCDEVITT
SECRETARY

WILLIAM L. MEYER
DIRECTOR

Mr. William Arrants,
Manager of Environmental
Affairs / Regulatory Compliance
Southern Wood Piedmont Co.
P.O. 5447
Spartanburg, South Carolina 29304

Re: Review and Comment on Submittal:
Schnabel Engineering Report
on Remedial Investigation,
Southern Wood Piedmont - Wilmington Site
NCD 058 517 467

Dear Mr. Arrants:

Thank you for your timely submittal of the above draft RI report. I have reviewed the report for compliance with the terms of the State Deferral Administrative Order on Consent, and for factual consistency with the attached references and other sources of information. Schnabel Engineering has performed a thorough collation of the existing analytical data and site investigations completed to date. Attached are general comments on the status of remedial investigation of the site, as well as specific comments on the contents and findings of the draft RI report.

SWP is directed to submit a Proposed RI Workplan addressing additional sampling requirements within 30 days of receipt of these comments. Following our review and comment on the Proposed Workplan, SWP will have 30 days to revise the Draft RI Workplan as needed. If you have any questions or scheduling concerns, please contact me at (919) 733-2801, Ext. 277.

Sincerely,

Stuart F. Parker, Jr.
Hydrogeologist
NC Superfund Section

Attachments

cc: Mr. Gregory Kuntz, Schnabel Engineering
Pat DeRosa
File

Review and Comment on
June 1999 Draft Remedial Investigation Report
Southern Wood Piedmont Site
Wilmington, New Hanover County, NC
NCD 058 517 467

Stuart F. Parker
NC Superfund Section
August 1999

PART I: GENERAL COMMENTS:

- 1) Sampling completed at the site has identified creosote contamination in sediments along the site's drainage ditch and lower Greenfield Creek, plus localized creosote contamination at the Cape Fear waterfront. Sampling results to date do not indicate that creosote contamination has migrated from Greenfield Creek to sediments on the adjacent Cape Fear River bottom. However, creosote-contaminated sediment was evident directly upstream of the tidal gate within the mouth of the creek.
- 2) Arsenic concentrations in the above sediment samples exceeded the State Soil Remediation Goal, however, the concentrations were generally in the same range as background levels. Possible exceptions were drainage ditch ESI samples SD-03, SD-06 and SD-08, for which arsenic results were qualified as estimated values. The Superfund Section concurs that the arsenic concentrations in Greenfield Creek and the Cape Fear River appear to represent ambient conditions.
- 3) None of the sediment samples has been tested for chlorinated dibenzodioxins/dibenzofurans. These soil contaminants were introduced to the site with the use of pentachlorophenol, and may have migrated to the waterways. As part of the RI, selected sediment locations previously sampled during site assessment should be resampled specifically for these contaminants, to determine whether release has occurred to the waterway. Results will indicate whether further evaluation for dioxins/furans is needed in the waterways.
- 4) Creosote-contaminated sediment locations identified thus far within the drainage ditch and Greenfield Creek are separated by intervals ranging up to several hundred feet. This resolution was adequate for site assessment purposes. However, higher-resolution sediment characterization will be required to delineate "hot" segments of the ditch and creek bed during Remedial Investigation. If dioxins/furans are detected above background at the site assessment sediment sample locations, the RI will require higher-resolution sampling for these contaminants as well.
- 5) Access routes to lower Greenfield Creek have been posted against trespassing by the State Ports Authority, in order to discourage continued fishing there. However the State of NC requires analytical documentation of fish tissue contamination before posting a fish consumption advisory. Results of ESI fish tissue sampling were inconclusive. Therefore, fish tissue sampling will be required as part of the RI.

6) The 1996 Human Health and Ecological Risk Assessment report for Southern Wood Piedmont is based on incomplete characterization of the site (see above), and on the presumed historical non-use of Greenfield Creek as a fishery, which remains a point of controversy. Human health risk scenarios should include fish consumption from the drainage ditch/Greenfield Creek.

The ecological risk assessment pre-dates the EPA's 1997 *Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments* (EPA 540-R-97-006). RI risk assessment must be in compliance with this guidance, and incorporate the results of future RI sampling.

NC Superfund Section Industrial Hygiene Consultant David Lilley reviewed the Chemrisk risk assessment report in June 1996. His technical comments are attached.

7) US EPA Region IV and State Inactive Hazardous Sites Program (IHSP) personnel agree that ecotoxicity testing of drainage ditch and Greenfield Creek sediments is an appropriate approach to evaluating ecological risk at the site. However, they maintain that *chronic* exposure scenarios will be required to complete a satisfactory evaluation. RI ecotoxicity studies and risk determinations will be reviewed by the NC Superfund Section and the NC Division of Water Quality.

8) Recent groundwater data and observations indicate that additional vertical migration of creosote DNAPL may be occurring beneath the site. Although groundwater is not the medium of primary concern at this site, the technical feasibility of partial recovery of creosote DNAPL will be investigated during site remediation.

9) At present, only the deed for the northern (former City of Wilmington) site parcel contains a restriction clause limiting future site use. This clause alone does not satisfy state requirements, as outlined in the August 1999 IHSP *Guidelines for Assessment and Cleanup*, Appendix D. In the event that alternate site-specific soil cleanup goals are to be sought, based on restricted future land use at the site, a request for Declaration of Perpetual Land Use Restrictions may be submitted to DENR from State Ports Authority as part of the Remedial Action Plan.

PART II: TECHNICAL COMMENTS SPECIFIC TO DRAFT RI REPORT:

Section 5.5

P. 11, Parag. 4-5: Several of the slug test wells were not screened across the entire thickness of their respective aquifer(s). However, the hydraulic conductivity results are consistent with the composition of the aquifer materials.

Section 5.9

P. 14, Parag. 5:

The tidal gate would not necessarily prevent sediment transport from Greenfield Creek to the Cape Fear River, especially during high creek discharge events at low river tide. Nor would the gate exclude all swimming organisms in the Cape Fear River from entering Greenfield Creek. Immature fish characteristically use tributaries to avoid predation and food competition in larger water bodies. Note that mature game fish were observed in Greenfield Creek, both during the 1997 Expanded Site Inspection and during an off-site reconnaissance by the NC Superfund Section on 4/20/99.

Section 6.2

P. 15, Parag. 6:

Emergency surface-water intakes on Smith and Toomers Creeks have been unused for several decades due to salt water encroachment.

Section 7.0

P. 16:

The references document those environmentally sensitive areas present within the study area, but not the specific absence of the other environmentally sensitive areas.

Section 10.0

P. 20:

Greenfield Creek was channelized between 1938 and 1949. The on-site drainage ditch is not evident in the 1938 photograph, suggesting that contaminant migration to the ditch and creek occurred subsequent to that time

Section 12.0

P. 23, Item 3:

Position of new ditch in relation to covered ditch is unclear from description, but appears to be to the south.

Section 13.16

Ref. 35, Parag. 5:

Table 2-5 does not list State Soil Remediation Goals for each dioxin and furan species.

P. 36, Parag. 2:

Possible semi-volatile contaminant sources > 0.5 mile upstream of site are not identified, nor are they specified as being on Greenfield Creek or the Cape Fear River. Cite source.

Section 13.17

P. 37, Parag. 5:

The indicated changes in total wood-preserving constituent concentrations within the landfarm are not evident from examination of Tables 10-1 through 10-6. Cite samples used in the determination.

P. 37, Parag. 7;
P. 38, Parag. 2:

SS-14 is invalid as a background sample due to likely PAH contamination from the Wilmington Coal Gas Plant Site, NCD 986 188 910. SS-16, SS-20, and SS-22 through SS-24 demonstrate that PAH is not ubiquitous in the river system. Contribution of site contribution to Greenfield Creek is demonstrable from sediment samples.

Section 13.18

P. 39, Bullet 1:

Copper was detected in surface water, but at concentrations less than the Class SC water quality standard.

P. 39, Bullet 3:

See SS-14 comment above.

P. 39, Bullet 5:

Greenfield Creek Tidal Gate is not a barrier against exposure via potential sediment migration to the Cape Fear River.

P. 39, Bullet 6:

See game fish comment above.

Section 31

Pp. 49-51:

Summary table does not indicate the absence of sample analytical data for any medium, e. g., Dioxin in Sediment. Instances where sampling has not occurred should be indicated "NA"

Section 32.3

P. 54, Parag. 3:

Deed restrictions for site use do not meet requirements outlined in IHSP Guidance, Appendix D. If alternate cleanup goals are to be sought based on restricted land use at site, request for Declaration of Perpetual Land Use Restrictions by State Ports Authority may be submitted to DENR as part of the Remedial Action Plan.

Parag. 5:

Same as P. 37, Paragraph 7.

Section 32.4

P. 56, Parag. 1:

As < 50 ug/l;
Cr < 50 ug/l;
Cu > 3 ug/l, but also detected in background sample.

Section 32.5

Pp. 57-58:

Creosote DNAPL exists beneath both southern and northern parcels of the site. The DNAPL apparently has already fully penetrated the peat layer and has begun pooling at the base of the intermediate (sandy) aquifer. Coarseness of the sandy aquifer materials and continued product mobility indicate the potential for some product recovery in areas of significant DNAPL thickness.

June 17, 1996

TO: Jack Butler
FROM: David Lilley DBL
RE: Comments prepared on the Human Health Risk Assessment
for the Southern Wood Piedmont Site, Wilmington, NC
May 29, 1996

After reviewing the above mentioned document, I offer the following comments:

1. Page ES-1, second paragraph, next to the last sentence: It is stated that true risks may be zero. There is no such thing as zero risk, risk is either above or below acceptable levels.
2. Table 3-3: The unites for the Inhalation Unit Risk Value should be $(\text{ug}/\text{m}^3)^{-1}$.
3. Table 3-3: The Inhalation Slope Factor for Benzo(b)fluoranthene should be $6.10\text{E}-01$, not $6.10\text{E}+00$ as written.
4. Tables 3-3 and 3-4: Was EPA-ORD consulted before extrapolating from the oral SF to inhalation SF (Table 3-3) and inhalation RfD to oral RfD (Table 3-4)? Such a consultation (and the appropriate documentation) will be necessary before these extrapolations can be accepted.
5. Tables 4-1 and 4-2, Lung Deposition Fraction (LDF): It is unclear to the reader where this factor used. According to EPA, this factor is to be used when extrapolating from an oral toxicity value to an inhalation value (under the guidance of EPA-ORD). See comment #4.
6. Table 4-9: The units for the dermal permeability coefficients are cm/hr , not cm^2/hr as written.
7. Table 4-5: Benzo(k)fluoranthene is listed on Table 2-3 as a COPC for Surface soil, but there is no Exposure Point Concentration (EPC) listed in Table 4-5. Please explain this inconsistency.
8. Tables 4-4 and 4-7: There is an EPC for groundwater listed for phenanthrene in these tables, but phenanthrene is not listed as a COPC in groundwater in Table 2-6. Please explain this inconsistency.

9. Appendix B, Industrial Scenario (typical) page 11: The EPC for benzene (according to Table 4-7) is 0.006, not - as listed on this page. Please make the appropriate correction.
10. Appendix B, Industrial Scenario (high end) page 1: The EPC for benzene (according to Table 4-7) is 0.009, not - as listed on this page. Please make the appropriate correction.
11. Appendix B, Trespasser Scenario (typical), pages 8, 10, and 11: The concentration of 1.5E+00 mg/kg for benzo(k)fluoranthene does not appear on Table 4-5 (Exposure Point Concentrations). Please explain this inconstancy.
12. Appendix B, Trespasser Scenario (high end), pages 2, 4, and 5: The concentration of 1.9E+00 mg/kg for benzo(k)fluoranthene does not appear on Table 4-5 (Exposure Point Concentrations). Please explain this inconstancy.
13. It is recommended that an Exposure Point Concentration summary table be added to Chapter 4 for the landfarm area.

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF WASTE MANAGEMENT

May 24, 1999



JAMES B. HUNT JR.
GOVERNOR

WAYNE MCDEVITT
SECRETARY

WILLIAM L. MEYER
DIRECTOR

VIA UPS OVERNIGHT MAIL

Mr. Jeff Rosbach, President
Southern Wood Piedmont Company
591 Springfield Road
Spartanburg, SC 29304

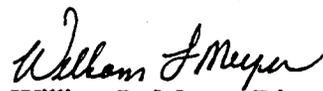
SUBJECT: Finalized Administrative Order on Consent
Southern Wood Piedmont Site
Wilmington, New Hanover County, NC
USEPA ID Number: NCD 058 517 467

Dear Mr. Rosbach:

I am pleased to inform you that the US EPA has approved our request for deferral of the Southern Wood Piedmont site. Enclosed is a copy of the Administrative Order on Consent (AOC) that was signed today, May 24, 1999.

Pursuant to the execution of this AOC, the next step in the process is the submittal of four (4) copies of the Remedial Investigation Report to the division within thirty (30) days, no later than June 24, 1999. If you have any questions, please contact Stuart Parker at (919) 733-2801, ext. 277.

Sincerely,


William L. Meyer, Director
Division of Waste Management

Attachments

cc: Stuart Parker
Pat DeRosa
Rob Gelblum
Bill Arrants, SWP
Layton Bedsole, NC State Ports Authority
Tom Pollard, City of Wilmington
Luis Flores, US EPA
New Hanover County Library, Information Repository

**NORTH CAROLINA DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
SUPERFUND SECTION**

**IN RE: SOUTHERN WOOD PIEDMONT CO.
NCD 058 517 467
WILMINGTON, NORTH CAROLINA
NEW HANOVER COUNTY**

**ADMINISTRATIVE ORDER
ON CONSENT PURSUANT TO
N.C.G.S. 130A-310.9(b) AND
SUPERFUND STATE DEFERRAL
MEMORANDUM OF
AGREEMENT**

DOCKET NUMBER 97-SF-117

The following constitutes the agreement of the parties hereto. This Administrative Order on Consent (Consent Order) is entered into pursuant to the Superfund State Deferral Memorandum of Agreement between the US EPA Region IV (EPA) and the State of North Carolina. Southern Wood Piedmont Company concurs with the conclusions of law contained herein solely for purposes of this Consent Order.

I. JURISDICTION

This Consent Order is entered into under authority vested in the Secretary of the North Carolina Department of Environment and Natural Resources (Department) by North Carolina's Inactive Hazardous Sites Response Act of 1987 (the Act), which constitutes Part 3, Article 9 of Chapter 130A of the North Carolina General Statutes (N.C.G.S.). N.C.G.S. 130A-310 *et seq.* The Secretary of the Department has delegated this authority to the Director of the North Carolina Division of Waste Management (Director).

II. STATEMENT OF PURPOSE

This Consent Order is entered into for the purpose of addressing the hazardous substance or waste disposal site (the Site) defined in Section III. A. of this Consent Order, which the Department has determined endangers public health or the environment. In entering into this Consent Order, the objective of the Division of Waste Management (Division) and Southern Wood Piedmont Company is for Southern Wood Piedmont Company to implement a voluntary remedial action program approved by the Division involving: (1) preparation of a Remedial Investigation Plan to evaluate the extent of contamination related to wood preserving operations conducted on the Site, whether comingled with other contaminants or not; (2) implementation of the Remedial Investigation Plan; (3) completion of a Remedial Action Plan to evaluate alternatives for meeting cleanup standards; and (4) implementation of the approved Remedial Action Plan.

III. STIPULATIONS OF FACT

- A. "The Site" consists of ~~two contiguous~~ properties, currently owned by the ~~City of~~ ^{PPK} ~~Wilmington~~ and the State Ports Authority, ^{PPK} ~~respectively~~, located on Greenfield Street, Wilmington, New Hanover County, North Carolina, and any additional area which has become contaminated as a result of hazardous substances or waste disposed at that property.
- B. Southern Wood Piedmont Company or a predecessor company conducted wood treating operations at the Site from 1932 through 1983. Those operations included the use and application of creosote, pentachlorophenol, and chromated copper arsenate.
- C. Surface soil sampling at the Site has revealed the presence of polynuclear aromatic hydrocarbons, arsenic, and dioxins.
- D. Groundwater sampling at the Site has revealed the presence of volatile organics and polynuclear aromatic hydrocarbons in the groundwater, plus non-aqueous phase liquid creosote product in the subsurface.
- E. Sediment sampling in the site's drainage ditch, and downgradient along Greenfield Creek, has revealed the presence of polynuclear aromatic hydrocarbons characteristic of creosote.

IV. CONCLUSIONS OF LAW

- A. The substances identified in Sections III. C., D. and E. above are hazardous substances as defined in the Comprehensive Environmental Response, Compensation and Liability Act/Superfund Amendments and Reauthorization Act, 42 U.S.C. Section 9601 *et seq.*, and are thus such substances for purposes of the Act pursuant to N.C.G.S. 130A-310(2).
- B. Disposal of hazardous substances referred to in the preceding paragraph has occurred at the Site within the meaning of N.C.G.S. 130A-310(3) pursuant to N.C.G.S. 130A-290(a)(6).
- C. The Site is an inactive hazardous substance or waste disposal site for purposes of the Act pursuant to N.C.G.S. 130A-310(3).
- D. Southern Wood Piedmont Company is an owner, operator, or other responsible party in relation to the Site within the meaning of N.C.G.S. 130A-310.9, pursuant to N.C.G.S. 130A-310(4), -310(5), -310(9), and -310.7.

- E. This Consent Order is authorized pursuant to the power of the Secretary under N.C.G.S. 130A-310.9(b), and by delegation the Director, to enter into agreements with owners, operators, or other responsible parties for implementation of voluntary remedial action programs as to inactive hazardous substance or waste disposal sites in accordance with remedial action plans approved by the Department.

V. REIMBURSEMENT OF COSTS

- A. As evidenced by Attachment A hereto, Southern Wood Piedmont Company has paid, or agreed to repay, EPA \$619,069.84 in past federal response costs which EPA determines are owed in relation to the Site. Those costs shall include, but may not be limited to, the costs of activities conducted by the Division and funded under federal Superfund cooperative agreements.
- B. Southern Wood Piedmont Company shall reimburse the Division for all federally funded oversight and enforcement costs the Division incurs pursuant to this Consent Order. The Division will mail Southern Wood Piedmont Company quarterly cost summaries and invoices for these costs. The cost summaries will be of the type provided by the Division to EPA as part of the documentation which the Division provides to EPA for cost recovery purposes. Within sixty (60) days of receiving each invoice, Southern Wood Piedmont Company shall submit full payment to the Division. Payment shall be by certified or cashier's check payable to "NC DENR".

VI. WORK TO BE PERFORMED

All work performed pursuant to plans approved under this Consent Order shall be under the direction and supervision of a professional engineer or a licensed geologist with expertise in hazardous substance site cleanup and comply with the current U.S. Environmental Protection Agency (EPA) Region IV, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996.

- A. Within thirty (30) days after the execution of this Consent Order, Southern Wood Piedmont Company shall submit to the Division four (4) copies of a Remedial Investigation Report organized in sections corresponding to and including at least the items listed below in Sections VI. D. and G.
- B. Within thirty (30) days of receiving notice from the Division of any deficiency in the Remedial Investigation Report, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to correct such deficiency. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's

ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. When the Division determines that the Remedial Investigation is complete, the Division will notify Southern Wood Piedmont Company in writing.

- C. Should additional remedial investigation work phases be necessary, Southern Wood Piedmont Company shall submit the subsequent work phase investigation plan within thirty (30) days of receiving notice from the Division of the additional work phase required. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. The requirements for the submittal and content of plans and reports under Sections VI. D., E., F., G., and H. shall apply to subsequent work plans and reports except where, in the Division's sole discretion, the submission of such would duplicate a previous submittal.
- D. Within thirty (30) days of receiving notice from the Division of the additional work phase required, Southern Wood Piedmont Company shall submit to the Division four (4) copies of a Supplemental Remedial Investigation Plan (Investigation Plan) organized in sections corresponding to the following items and including at least:
1. Site location information including site street address, longitude and latitude, and site and surrounding property land use.
 2. A summary of all management practices employed at the site for hazardous wastes and any wastes managed on site that may have contained hazardous substances, including a list of types and amounts of waste generated (with RCRA waste codes), treatment and storage methods, and ultimate disposition of wastes; a description of the facility's past and current RCRA status; the location and condition of any vessels currently or previously used to store any chemical products, hazardous substances or wastes; and a summary of the nature of all on-site hazardous substance releases, including one-time disposals or spills.
 3. United States Geological Survey topographic maps sufficient to display topography within a one-mile radius of the site.
 4. A site survey plat (prepared and certified by a Registered Land Surveyor) including scale; benchmarks; north arrow; locations of property boundaries, buildings, structures, all perennial and non-perennial surface water features, drainage ditches, dense vegetation, known and suspected spill or disposal areas, underground utilities, storage vessels, existing on-site wells; and identification of all adjacent property owners and land usage.

5. A description of local geologic and hydrogeologic conditions.
6. Inventory and map of all wells, springs, and surface-water intakes used as sources of potable water within a one-half mile radius of the center of the site. If the site is greater than one hundred (100) acres in size, the inventory and map must cover a one-mile radius from the center of each source area.
7. Identification of environmentally sensitive areas on and adjacent to the Site including:

- Marine Sanctuaries
- National and State Parks
- Designated and proposed Federal and State Wilderness and Natural Areas
- Areas identified under the Coastal Zone Management Act
- Sensitive areas identified under the National Estuary Program or the Near Coastal Waters Program
- Critical areas identified under the Clean Lakes Program
- National Monuments
- National and State Historical Sites
- National and State Seashore, Lakeshore, and River Recreational Areas
- Critical habitats and habitats known to be used by State or Federally designated or proposed endangered or threatened species or species under review as to their endangered or threatened status
- National and State Preserves and Forests
- National and State Wildlife Refuges
- Coastal Barriers and Units of a Coastal Barrier Resources System
- Federal land designated for protection of natural ecosystems
- Spawning areas critical for the maintenance of fish/shellfish species within river, lake or coastal tidal waters
- Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which such fish spend extended periods of time
- Terrestrial areas utilized for breeding by large or dense aggregations of animals
- Rivers State or Federally designated Scenic or Wild
- State lands designated for wildlife or game management
- Areas important to maintenance of unique biotic communities
- State-designated areas for protection or maintenance of aquatic life
- Wetlands

8. A copy of the current owner's(s') deed(s) to the property.
9. A chronological listing of all previous owners and each period of ownership since the property was originally developed from pristine land.
10. Operational history with aerial photographs and Sanborne Fire Insurance maps to support land-use history.
11. A list of all hazardous substances which have been used or stored at the site,

and approximate amounts and dates of use or storage as revealed by available written documentation and interviews with a representative number of former and current employees or occupants possessing relevant information.

12. Site environmental permit history, including copies of all federal, state, and local environmental permits, past and present, issued to Southern Wood Piedmont Company or within Southern Wood Piedmont Company custody or control.
13. A summary of all previous and ongoing environmental investigations and environmental regulatory involvement with the site, and copies of all associated reports and laboratory data.
14. Proposed procedures for characterizing site geologic and hydrogeologic conditions and identifying and delineating each contamination source as to each affected environmental medium, including any plan for special assessment such as a geophysical survey.
15. Proposed methods, locations, depths of, and justification for, all sample collection points for all media sampled, including monitoring well locations and anticipated screened intervals.
16. Proposed field and laboratory procedures for quality assurance/quality control.
17. Proposed analytical parameters and analytical methods for all samples.
18. A contact name, address and telephone number for the principal consultant and laboratory, and qualifications and certifications of all consultants, laboratories and contractors expected to perform work in relation to this work plan. Any laboratory retained must currently be either certified to analyze applicable certifiable parameters under Title 15A of the North Carolina Administrative Code, Subchapter 2H, Section .0800, or be a contract laboratory under the EPA Contract Laboratory Program.
19. Equipment and personnel decontamination procedures.
20. A health and safety plan that conforms to OSHA requirements and assures that the health and safety of nearby residential and business communities will not be adversely affected by activities related to the remedial investigation.
21. A proposed schedule for site activities and reporting.

22. Any other information required by the Division or considered relevant by the remediating party.
 23. If this document includes any work that would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If this document includes any work that would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.
- E. Within thirty (30) days of receiving notice from the Division of any deficiency in the Investigation Plan, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to correct such deficiency. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order.
- F. When the Division determines that the Investigation Plan is complete, the Division will notify Southern Wood Piedmont Company in writing. Southern Wood Piedmont Company shall begin the Supplemental Remedial Investigation no sooner than receiving written approval of the Investigation Plan from the Division, nor later than thirty (30) days thereafter.
- G. Within one hundred twenty (120) days of receiving written approval of the Investigation Plan from the Division, Southern Wood Piedmont Company shall submit to the Division four (4) copies of a Supplemental Remedial Investigation Report documenting implementation of the approved Investigation Plan, organized in sections corresponding to the following items and including at least:
1. A narrative description of how the investigation was conducted, including a discussion of any variances from the approved work plan.
 2. A description of groundwater monitoring well design and installation procedures, including drilling methods used, completed drilling logs, "as built" drawings of all monitoring wells, well construction techniques and materials, geologic logs, and copies of all well installation permits.
 3. A map, drawn to scale, showing all soil, surface water and sediment sample locations and monitoring well locations in relation to known disposal areas or other sources of contamination. Monitoring wells must be surveyed to a known benchmark. Soil sample locations must be surveyed to a known benchmark or flagged with a secure marker until after the remedial action is completed. Monitoring well locations and elevations must be surveyed by a Registered Land Surveyor.
 4. A description of all laboratory quality control and quality assurance

procedures followed during the remedial investigation.

5. A description of procedures used to manage drill cuttings, purge water and decontamination water.
 6. A summary of site geologic conditions, including a description of soils and vadose zone characteristics.
 7. A description of site hydrogeologic conditions (if groundwater assessment is determined to be necessary), including current uses of groundwater, notable aquifer characteristics, a water table elevation contour map with groundwater flow patterns depicted, tabulated groundwater elevation data, and a description of procedures for measuring water levels.
 8. Tabulation of analytical results for all sampling (including sampling dates and soil sampling depths) and copies of all laboratory reports (including QA/QC support data referenced to specific samples).
 9. Soil, groundwater, surface water and sediment contaminant delineation maps and cross sections, including scale and sampling points with contaminant concentrations.
 10. A description of procedures and the results of any special assessments such as geophysical surveys, immunoassay testing (EPA SW-846 4000 series methods), soil gas surveys, or test pit excavations.
 11. Copies of all field logs and notes, and color copies of site photographs.
 12. Any other information required by the Division or considered relevant by the remediating party.
 13. If this document includes any work that would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If this document includes any work that would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.
- H. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. Within thirty (30) days of receiving notice from the Division of any deficiency in the Supplemental Remedial Investigation Report, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to correct such deficiency. When the Division determines that the Remedial Investigation is complete, the Division will notify Southern Wood Piedmont Company in writing.

- I. Should additional remedial investigation work phases be necessary, Southern Wood Piedmont Company shall submit the subsequent work phase investigation plan within thirty (30) days of receiving notice from the Division of the additional work phase required. The requirements for the submittal and content of plans and reports under Sections VI. D., E., F. G., and H. shall apply to subsequent work plans and reports except where, in the Division's sole discretion, the submission of such would duplicate a previous submittal.
- J. If the Division determines that hazardous substances or waste disposed at the Site have affected any drinking water wells, Southern Wood Piedmont Company shall, by a deadline established by the Division, provide an alternate drinking water source for users of those wells.
- K. Following Southern Wood Piedmont Company's completion of the Remedial Investigation, the Division will ascertain cleanup standards for each contaminated medium at the Site. The Division shall meet with Southern Wood Piedmont to review the basis for cleanup standards, risk levels, remedial alternatives, design, end use of the site, and institutional controls. Southern Wood Piedmont Company shall use the Division's cleanup standards to develop remedial alternatives in the Remedial Action Plan, as described in Section VI. L. of this Consent Order.
- L. Within ninety (90) days of receiving written notice from the Division that the Remedial Investigation is complete, Southern Wood Piedmont Company shall submit to the Division four (4) copies of its proposed Remedial Action Plan (Action Plan) for all contaminated media at the Site that exceed the cleanup standards ascertained by the Division, organized in sections corresponding to the following items and including at least:
1. A statement of objectives for the Remedial Action.
 2. A listing of potentially applicable technologies.
 3. An evaluation of remedial alternatives using the following feasibility study criteria:
 - a. Protection of human health and the environment, including attainment of remediation goals.
 - b. Compliance with applicable federal, State and local regulations.
 - c. Long-term effectiveness and permanence.
 - d. Reduction of toxicity, mobility and volume.
 - e. Short-term effectiveness: effectiveness at minimizing the impact of the site remediation on the environment and the local community.
 - f. Implementability: technical and logistical feasibility, including an estimate of time required for completion.
 - g. Cost.
 - h. Community acceptance.

4. A detailed description of Southern Wood Piedmont Company's preferred remedial alternative for each contaminated medium, from among the alternatives evaluated, including an evaluation of potential impact to any sensitive environments identified on or near the site and construction designs and specifications (any proposed treatment technology may require on-site testing or bench-scale testing of Site waste to verify its effectiveness).
 5. A description of all activities that are necessary to ensure that the proposed method(s) of remedial action is (are) implemented in compliance with applicable laws and regulations and that cleanup goals established hereunder are met. These activities include, but are not limited to, well installation and abandonment, sampling, run-on/run-off control, and discharge of treated waste streams.
 6. The results of any treatability studies and/or additional site characterization needed to support the remedy.
 7. A description of methods of post-remedial and confirmatory sampling, and any necessary maintenance.
 8. A health and safety plan that conforms to OSHA requirements and assures that the health and safety of nearby residential and business communities will not be adversely affected by activities related to the Remedial Action.
 9. Equipment and personnel decontamination procedures.
 10. A proposed schedule for completion of remedial design and for Remedial Action construction, implementation and periodic sampling and reporting.
 11. If this document includes any work that would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If this document includes any work that would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.
- M. Southern Wood Piedmont Company shall provide to the Division the number of additional copies of the proposed Action Plan determined by the Division to be required for distribution to the local health director, register of deeds, and each public library in the county where the Site is located, if requested by the Division. The Division shall also mail notice of the Action Plan to those who have requested notice that such plans have been developed, as provided in N.C.G.S. 130A-310.4(c)(2). The Division will not approve the Action Plan until at least thirty (30) days after public notice was provided.
- N. Within thirty (30) days of receiving notice from the Division of any deficiency in the Action Plan, Southern Wood Piedmont Company shall submit to the Division

information or material sufficient to correct such deficiency.

- O. Southern Wood Piedmont Company shall begin implementation of the Action Plan no sooner than receiving written approval from the Division nor later than sixty (60) days thereafter.
- P. Any requests for modifications of the approved Action Plan must be submitted in writing to the Division, and may not be incorporated or implemented unless and until approved in writing by the Division.
- Q. Southern Wood Piedmont Company shall provide to the Division: weekly written or telephone progress reports each Friday during the soil and waste remedial action if less than one (1) month in duration; quarterly reports during groundwater remedial action, any soil and waste remedial action greater than one (1) month in duration, and any necessary post-remedial maintenance; and a final report with confirmatory sample data documenting complete implementation of the approved Action Plan. The quarterly reports and final report should include, without limitation, complete "as-built" drawings and specifications of all remedial action systems; tabulated laboratory data; the location and depth of samples collected; a description of all field and laboratory quality control/quality assurance procedures; and legible and complete copies of all records of periodic system inspections, laboratory reports, waste manifests and chain of custody documentation generated during the reporting period. Quarterly reports shall be provided by the tenth day after each quarter concludes, with the first quarter commencing on the date of written approval of the Action Plan by the Division.

The final report shall be provided within one (1) month following complete implementation of the approved Action Plan. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. The report shall include a certification under oath by a corporate official of Southern Wood Piedmont Company in charge of a principal business function stating: "To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this certification is true, accurate and complete." If the document includes any work which would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If the document includes any work which would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.

Within thirty (30) days of receiving notice from the Division of any deficiency in the reports required by this paragraph or in the implementation of the plans required by this Consent Order, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to demonstrate correction of such deficiencies.

- R. When the Division determines that the following conditions apply, Southern Wood Piedmont Company shall submit, for the Division's approval, a survey plat for recordation which complies with N.C.G.S. 130A-310.8(a):

<u>Condition</u>	<u>Deadline for Submittal to Division</u>
(1) Remedial action or control of groundwater only is required.	Within thirty (30) days of receiving notice from the Division that the remedial investigation is complete.
(2) Remedial action or control of groundwater and another environmental medium is required.	Within thirty (30) days of receiving notice from the Division that non-groundwater remedial action is complete.
(3) Recordation is appropriate as part of the approved remedy.	Within thirty (30) days of receiving notice from the Division to submit such a plat.

- S. When the Division determines that implementation of the approved Action Plan and the final report is complete, the Division will notify Southern Wood Piedmont Company in writing. Thereafter, if Southern Wood Piedmont Company believes it has remediated the Site to current standards as provided in Part 5, Article 9 of Chapter 130A of the North Carolina General Statutes, it may submit a written request to the Division for such a determination, accompanied by the fee required by N.C.G.S. 130A-310.39(a)(2).

VII. SAMPLING, ACCESS, AND DATA/DOCUMENT AVAILABILITY

- A. The Division or its representatives may take split or duplicate samples of any samples collected by Southern Wood Piedmont Company pursuant to this Consent Order. Southern Wood Piedmont Company shall notify the Division not less than ten (10) days in advance of any sampling, assessment or remediation activities. This notification may be given verbally in the field by Southern Wood Piedmont Company to the Division.
- B. To the extent permitted by law, the Division or its representatives may conduct any field activity it deems appropriate in relation to the Site. Southern Wood Piedmont Company may take split or duplicate samples of any samples collected by the Division during such field activity.
- C. While this Consent Order is in effect, Division personnel and their representatives may, in addition to exercising any related legal rights, enter the Site without notice at all times and, while present: review the progress of activities required by this Consent Order; conduct such tests as the Division deems necessary; verify the data submitted to the Division by Southern Wood Piedmont Company; inspect and copy any and all records, files, photographs, operating logs, contracts, sampling and monitoring data,

and other documents relating in any way to this Consent Order; and otherwise assess Southern Wood Piedmont Company's compliance with this Consent Order. All parties with access to the Site pursuant to this paragraph shall comply with all approved health and safety plans and the current U.S. Environmental Protection Agency (EPA) Region IV, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996.

- D. Unless a confidentiality claim covering information provided under this Consent Order is made pursuant to law and adequately substantiated when the information is submitted, such information may be made available to the public by the Division without further notice to Southern Wood Piedmont Company. Southern Wood Piedmont Company agrees that under no circumstances shall analytical data generated pursuant to this Consent Order be considered confidential.
- E. In any government enforcement action brought against Southern Wood Piedmont Company, Southern Wood Piedmont Company waives any objections to the admissibility into evidence (but not objections as to the weight) of the results of any analyses of sampling conducted by or for Southern Wood Piedmont Company at the Site or of other data gathered pursuant to this Consent Order.
- F. If Southern Wood Piedmont Company is unable by reasonable efforts to gain access to other property as necessary pursuant to this Consent Order, the Division shall assist Southern Wood Piedmont Company in obtaining access.

VIII. DELAY IN PERFORMANCE

As soon as Southern Wood Piedmont Company is aware of the potential for delay, it shall submit to the Division written documentation of the reasons for the delay and the efforts made by Southern Wood Piedmont Company to avoid the delay, as well as a time by which such work can be completed. The Division shall review the documentation and shall promptly approve the new schedule if good cause is shown. Good cause may include, but is not limited to, extraordinary weather, natural disasters and national emergencies. At a minimum, good cause does not include normal inclement weather, increases in the cost of work to be performed under this Consent Order, financial difficulty for Southern Wood Piedmont Company in performing such work, failure by Southern Wood Piedmont Company to satisfy its obligations under this Consent Order (whether evidenced by a notice of deficiency or not), the pendency of dispute resolution, acts or omissions of Southern Wood Piedmont Company's contractors or representatives not otherwise constituting good cause, and failure by Southern Wood Piedmont Company or its contractors or representatives to make complete and timely application for any required approval or permit. The burden of demonstrating good cause for delay, and that the delay proposed is warranted, is Southern Wood Piedmont Company's.

IX. DISPUTE RESOLUTION

If Southern Wood Piedmont Company wishes to dispute any decision of the Division made pursuant to this Consent Order and cannot resolve the matter through informal negotiations, it shall, within fourteen (14) days of being notified of such decision, submit to the Division a written statement of the grounds for its dispute and of the decision it advocates. Within a reasonable period following its receipt of such a written statement, the Division shall issue a written decision on the disputed matter. Within fourteen (14) days of receiving the Division's written decision on the dispute, the Division shall have received from Southern Wood Piedmont Company a written statement as to whether Southern Wood Piedmont Company shall abide by the decision. If the Division does not receive such a statement, or the statement is to the effect that Southern Wood Piedmont Company shall not abide by the decision on the dispute, this Consent Order shall be deemed dissolved. Termination of the deferral status of this Site shall also be grounds for dissolution of this Consent Order. In the event of dissolution of this Consent Order, the Division shall retain all its applicable enforcement rights against Southern Wood Piedmont Company and Southern Wood Piedmont Company shall retain all applicable defenses. Southern Wood Piedmont Company's invocation of dispute resolution shall not alone excuse noncompliance with this Consent Order or any requirement established pursuant thereto.

X. ADDITIONAL PROVISIONS

- A. All documents submitted by to the Division pursuant to this Consent Order shall be sent by certified mail, return receipt requested, by Federal Express or other equivalent overnight service, or hand delivered to:

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

The Division will direct all correspondence related to this Consent Order to:

William P. Arrants
Manager of Environmental Affairs/Regulatory Compliance
Southern Wood Piedmont Company
P.O. Box 5447
Spartanburg, South Carolina 29304

- B. This Consent Order shall be binding upon, and inure to the benefit of, Southern Wood Piedmont Company, its agents, successors and assigns. The signatory for Southern Wood Piedmont Company to this Consent Order certifies that he/she is authorized to execute and legally bind Southern Wood Piedmont Company as to this Consent Order.

- C. Southern Wood Piedmont Company shall provide a copy of this Consent Order to each contractor or other person or entity retained to perform any work under this Consent Order within seven (7) days after the effective date of this Consent Order or the date of retaining their services, whichever is later. Southern Wood Piedmont Company shall condition any such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, Southern Wood Piedmont Company is responsible for compliance with this Consent Order and for ensuring that such contractors or other persons or entities comply with this Consent Order. Submittal by Southern Wood Piedmont Company of each document pursuant to this Consent Order shall constitute certification by the signatory and by Southern Wood Piedmont Company of the truth, accuracy and completeness of the information contained in that document.
- D. Subject to the reservation of rights in Section X.E. of this Consent Order, upon payment of the amounts specified in Section V. (Reimbursement of Costs) and upon completion of the work specified in Section VI. (Work to Be Performed) of this Consent Order to the satisfaction of the Division, the Department covenants not to sue or take any other civil or administrative action against Southern Wood Piedmont Company for any and all civil liability for injunctive relief or reimbursement of response costs in relation to the Site.
- E. The covenant not to sue set forth in Section X.D. above does not pertain to any matters other than those expressly specified in Section X.D. above. The Department reserves and the Consent Order is without prejudice to all rights against Southern Wood Piedmont Company with respect to all other matters, including but not limited to, the following:
- (1) claims based on a failure by Southern Wood Piedmont Company to meet a requirement of this Consent Order, including but not limited to Section V. (Reimbursement of Costs), Section VI. (Work to be Performed), Section VII. (Sampling, Access, and Data/Document Availability), and Section X. (Additional Provisions);
 - (2) any liability resulting from past or future releases of hazardous substances, pollutants or contaminants, at or from the Site caused or contributed to by Southern Wood Piedmont Company, its successors, assignees, lessees or sublessees;
 - (3) any liability resulting from exacerbation by Southern Wood Piedmont, its successors, assignees, lessees or sublessees, of contamination at the Site;
 - (4) any liability relating to hazardous substances, pollutants or contaminants not present or existing on or under the Site as of the effective date of this Consent Order;
 - (5) criminal liability;

- (6) liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessment incurred by the Department, to the extent permitted by law; and
 - (7) liability for violations of local, State or federal law or regulations.
- F. In the event the Division determines Southern Wood Piedmont Company is in violation of this Consent Order or requirements established pursuant thereto, the Division may: order Southern Wood Piedmont Company to remedy the violation(s) or temporarily or permanently halt implementation of this Consent Order; conduct part or all of the remediation itself, seek cost recovery; and/or take any other action within the Division's enforcement authority regarding inactive hazardous substance or waste disposal sites. In that event, Southern Wood Piedmont Company shall retain all applicable defenses. The dispute resolution procedure set forth in Section IX. above, in addition to applying to all other decisions made by the Division pursuant to this Consent Order, shall also apply to any determination by the Division that Southern Wood Piedmont is in violation of this Consent Order or requirements established pursuant thereto.
- G. To protect the public health or the environment, the Division may order a temporary or permanent halt to implementation of this Consent Order, or order actions within its authority regarding inactive hazardous substance or waste disposal sites in addition to or other than those required hereunder.
- H. All actions required pursuant to this Consent Order shall be in accordance with applicable local, state and federal laws and regulations, unless an exemption regarding particular state or local laws or regulations is specifically provided in this Consent Order now or later.
- I. Southern Wood Piedmont Company agrees to indemnify and save and hold harmless the State of North Carolina, and its agencies, departments, officials, agents, employees, contractors and representatives, including without limitation the State Ports Authority, from any and all claims or causes of action arising from or on account of acts or omissions of Southern Wood Piedmont Company or its officers, employees, receivers, trustees, agents, or assigns in relation to the Site. The State of North Carolina shall give prompt, written notice to Southern Wood Piedmont Company of all such claims or causes of action. Except to the extent this Consent Order constitutes a contract, neither the State of North Carolina nor any agency or representative thereof shall be held to be a party to any contract involving Southern Wood Piedmont Company relating to the Site.

- J. Southern Wood Piedmont Company shall preserve, for at least six (6) years after termination of this Consent Order, all records and documents in its possession or in the possession of its divisions, employees, agents, accountants, contractors or attorneys which relate in any way to this Consent Order. After this six (6)-year period, Southern Wood Piedmont Company shall notify the Division at least thirty (30) days prior to the destruction of any such records and documents. Southern Wood Piedmont Company shall comply with any written request by the Division, prior to the day set for destruction, to continue to preserve such records and documents or to provide them to the Division. Southern Wood Piedmont Company may assert any available right to keep particular records and documents, other than analytical data, confidential.

- K. Except as otherwise provided herein, this Consent Order shall not constitute a satisfaction of, or release from, liability for any claim arising as a result of operation, ownership or use of the Site by Southern Wood Piedmont Company, its agents, contractors, lessees, successors or assigns.

- L. This Consent Order may not be modified without the written consent of the parties.

- M. Except for obligations under Section X. F., G. and J. above, this Consent Order shall terminate when Southern Wood Piedmont Company receives written notice from the Division that all activities required pursuant to this Consent Order have been completed to the Division's satisfaction.

This Consent Order is entered into on the ___th day of _____ 1999:

William L Meyer
 William L. Meyer, Director
 Division of Waste Management
 North Carolina Department of Environment
 and Natural Resources

By: Jeff Rosbach
 (Signature)
Jeff Rosbach, President
 Name of Signatory, Title
Southern Wood Piedmont
 Company

CERCLA SECTION 122(h) (1) AGREEMENT
FOR RECOVERY OF PAST RESPONSE COSTS

IN THE MATTER OF:)
)
Southern Wood Piedmont Superfund Site))
Wilmington, New Hanover County))
North Carolina))
))
Southern Wood Piedmont Co., and))
its parent company Rayonier, Inc.))
))
Settling Parties.))
))
))

AGREEMENT FOR RECOVERY
OF PAST RESPONSE COSTS
U.S. EPA Region 4
CERCLA Docket No.99-01-C
PROCEEDING UNDER SECTION
122(h) (1) OF CERCLA
42 U.S.C. § 9622(h) (1)

CERCLA SECTION 122(h) (1) AGREEMENT
FOR RECOVERY OF PAST RESPONSE COSTS

TABLE OF CONTENTS

I.	<u>JURISDICTION</u>	1
II.	<u>BACKGROUND</u>	1
III.	<u>PARTIES BOUND</u>	2
IV.	<u>DEFINITIONS</u>	2
V.	<u>REIMBURSEMENT OF RESPONSE COSTS</u>	4
VI.	<u>FAILURE TO COMPLY WITH AGREEMENT</u>	4
VII.	<u>COVENANT NOT TO SUE BY EPA</u>	5
VIII.	<u>RESERVATIONS OF RIGHTS BY EPA</u>	5
IX.	<u>COVENANT NOT TO SUE BY SETTLING PARTIES</u>	6
X.	<u>EFFECT OF SETTLEMENT/CONTRIBUTION PROTECTION</u>	6
XI.	<u>RETENTION OF RECORDS</u>	7
XII.	<u>NOTICES AND SUBMISSIONS</u>	9
XIII.	<u>INTEGRATION</u> :	9
XIV.	<u>PUBLIC COMMENT</u>	10
XV.	<u>ATTORNEY GENERAL APPROVAL</u>	10
XVI.	<u>EFFECTIVE DATE</u>	10

CERCLA SECTION 122(h) (1) AGREEMENT
FOR RECOVERY OF PAST RESPONSE COSTS

IN THE MATTER OF:)	AGREEMENT FOR RECOVERY
)	OF PAST RESPONSE COSTS
Southern Wood Piedmont Superfund Site))	
Wilmington, New Hanover County)	U.S. EPA Region 4
North Carolina)	CERCLA Docket No.99-01-C
)	
Southern Wood Piedmont Co. and)	
its parent company, Rayonier, Inc.)	PROCEEDING UNDER SECTION
)	122(h) (1) OF CERCLA-
Settling Parties.)	42 U.S.C. § 9622(h) (1)
)	
)	

I. JURISDICTION

1. This Agreement is entered into pursuant to the authority vested in the Administrator of the U.S. Environmental Protection Agency ("EPA") by Section 122(h) (1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9622(h) (1), which authority has been delegated to the Regional Administrators of the EPA by EPA Delegation No. 14-14-D. This authority has been redelegated through the Director, Waste Management through the Associate Division Director for the Office of Superfund and Emergency Response to the Chief, Waste Programs Division.

2. This Agreement is made and entered into by EPA and the Southern Wood Piedmont Co. and its parent company Rayonier, Inc. ("Settling Parties"). The Settling Parties consent to and will not contest EPA's jurisdiction to enter into this Agreement or to implement or enforce its terms.

II. BACKGROUND

3. This Agreement concerns the Southern Wood Piedmont Superfund Site ("Site") located on Greenfield Street, Wilmington, New Hanover County, North Carolina. The Site is located in a light industrial area and was formerly a wood treatment and storage facility operated by the Settling Party. EPA alleges that the Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

4. During operation of the facility, the Settling Party, Southern Wood Piedmont Co. used creosote, pentachlorophenol and chromated copper arsenate in its wood treating processes at the Site. These identified substances are hazardous substances pursuant CERCLA, 42 U.S.C. Section 9601 et seq.

5. In response to the release or threatened release of hazardous substances at or from the Site, EPA undertook response actions at the Site pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604. In January 1985, EPA conducted a Screening Site Investigation which included the collection of groundwater, subsurface soils in land farming areas, surface water, and biological tissue samples. The sample results indicated the presence of organic constituents of creosote and inorganics associated with chromated copper arsenate. Subsequently, EPA conducted an Expanded Site Investigation (ESI) to further determine the nature of the contaminants present at the Site; to confirm if a release occurred and the attribution of those contaminants to the Site; and to identify possible pathways by which contamination could migrate from the Site. During the ESI additional samples were taken including biological tissue and subsurface soil samples. These investigations were detailed in a Report dated July 16, 1997.

6. In performing this response action, EPA incurred response costs at or in connection with the Site.

7. EPA alleges that the Settling Parties are responsible parties pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is liable for response costs incurred at or in connection with the Site.

8. EPA and the Settling Parties desire to resolve Settling Parties' alleged civil liability for Past Response Costs without litigation and without the admission or adjudication of any issue of fact or law.

III. PARTIES BOUND

9. This Agreement shall be binding upon EPA and upon the Settling Parties and its successors and assigns. Any change in ownership or corporate or other legal status of the Settling Parties, including but not limited to, any transfer of assets or real or personal property, shall in no way alter the Settling Parties' responsibilities under this Agreement. Each signatory to this Agreement certifies that he or she is authorized to enter into the terms and conditions of this Agreement and to bind legally the party represented by him or her.

IV. DEFINITIONS

10. Unless otherwise expressly provided herein, terms used in this Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Agreement or in any appendix attached hereto, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601, et seq.

b. "Agreement" shall mean this Agreement and any attached appendices. In the event of conflict between this Agreement and any appendix, the Agreement shall control.

c. "Day" shall mean a calendar day. In computing any period of time under this Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

d. "EPA" shall mean the United States Environmental Protection Agency and any successor departments, agencies or instrumentalities of the United States.

e. "Interest" shall mean interest at the current rate specified for interest on investments of the Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a).

f. "Paragraph" shall mean a portion of this Agreement identified by an arabic numeral or a lower case letter.

g. "Parties" shall mean EPA and the Settling Parties.

h. "Past Response Costs" shall mean all costs, including but not limited to direct and indirect costs, that EPA has paid at or in connection with the Site through April 24, 1998, but do not include Interest accrued on all such costs through such date.

i. "Section" shall mean a portion of this Agreement identified by a roman numeral.

j. "Settling Parties" shall mean Southern Wood Piedmont Company and its parent company, Rayonier, Inc.

k. "Site" shall mean the Southern Wood Piedmont Superfund Site which consists of the areal extent of all groundwater, sediment, soil and surface water contamination emanating from that property. The Site property is located on Greenfield Street in Wilmington, New Hanover County, North Carolina, and encompasses approximately fifty two acres of land bordered by Amerada Hess Petroleum Terminal to the north, the Paktank Petroleum Terminal to the south, the Cape Fear River to the West and the Optimist Park and Front Street to the east. The Site consists of two contiguous properties; currently, thirty five acres in the northern and central portion of the Site are owned by the City of Wilmington and the remaining seventeen acres are owned by the North Carolina State Ports Authority.

1. "United States" shall mean the United States of America, including its departments, agencies and instrumentalities.

V. REIMBURSEMENT OF RESPONSE COSTS

11. Within 30 days of the effective date of this Agreement, the Settling Party shall pay to the EPA Hazardous Substance Superfund \$619,069.84, in reimbursement of Past Response Costs.

12. Payments shall be made by certified or cashier's check made payable to "EPA Hazardous Substance Superfund." Each check shall reference the name and address of the party making payment, the Site name, the EPA Region and Site/Spill ID Number 04-48, and the EPA docket number for this action, and shall be sent to:

U.S. EPA Region 4
Attention: Superfund Accounting
P.O. Box 100142
Atlanta, Georgia 30384

13. At the time of payment, the Settling Parties shall send notice that such payment has been made to:

Paula Batchelor
Cost Recovery Section
61 Forsyth Street, SW
Atlanta, Georgia 30365

VI. FAILURE TO COMPLY WITH AGREEMENT

14. In the event that any payment required by Paragraph 11 is not made when due, Interest shall continue to accrue on the unpaid balance through the date of payment.

15. If any amounts due to EPA under Paragraph 11 are not paid by the required date, Settling Parties shall pay to EPA, as a stipulated penalty, in addition to the Interest required by Paragraph 14, \$200.00 per day that such payment is late.

16. Stipulated penalties are due and payable within 30 days of the date of demand for payment of the penalties. All payments to EPA under this Paragraph shall be identified as "stipulated penalties" and shall be made in accordance with Paragraphs 12 and 13.

17. Penalties shall accrue as provided above regardless of whether EPA has notified the Settling Parties of the violation or made a demand for payment, but need only be paid upon demand. All penalties shall begin to accrue on the day after payment is

due, and shall continue to accrue through the day the U.S. EPA receives full payment.

18. In addition to the Interest and Stipulated Penalty payments required by this Section and any other remedies or sanctions available to EPA by virtue of Settling Parties' failure to comply with the requirements of this Agreement, if Settling Parties fail or refuse to comply with any term or condition of this Agreement it shall be subject to enforcement action pursuant to Section 122(h)(3) of CERCLA, 42 U.S.C. § 9622(h)(3). If the United States, on behalf of EPA, brings an action to enforce this Agreement, Settling Parties shall reimburse the United States for all costs of such action, including but not limited to costs of attorney time.

19. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive payment of any portion of the stipulated penalties that have accrued pursuant to this Agreement.

VII.. COVENANT NOT TO SUE BY EPA

20. Except as specifically provided in Paragraph 21 (Reservations of Rights by EPA), EPA covenants not to sue Settling Parties pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), to recover Past Response Costs. This covenant shall take effect upon receipt by EPA of all amounts required by Section V (Reimbursement of Response Costs) and Section VI, Paragraphs 14 (Interest on Late Payments) and 15 (Stipulated Penalty for Late Payment). This covenant not to sue is conditioned upon the satisfactory performance by Settling Parties of its obligations under this Agreement. This covenant not to sue extends only to Settling Parties and does not extend to any other person.

VIII. RESERVATIONS OF RIGHTS BY EPA

21. The covenant not to sue by EPA set forth in Paragraph 20 does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Agreement is without prejudice to, all rights against the Settling Parties with respect to all other matters, including but not limited to:

a. liability for failure of Settling Parties to meet a requirement of this Agreement;

b. liability for costs incurred or to be incurred by the United States that are not within the definition of Past Response Costs;

c. liability for injunctive relief or administrative order enforcement under Section 106 of CERCLA, 42 U.S.C. § 9606;

d. criminal liability; and

e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments.

22. Nothing in this Agreement is intended to be nor shall it be construed as a release, covenant not to sue, or compromise of any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the United States may have against any person, firm, corporation or other entity not a signatory to this Agreement.

IX. COVENANT NOT TO SUE BY SETTLING PARTIES

23. The Settling Parties agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to Past Response Costs or this Agreement, including but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claims arising out of the response actions at the Site for which the Past Response Costs were incurred; and

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to Past Response Costs.

24. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. 300.700(d).

X. EFFECT OF SETTLEMENT/CONTRIBUTION PROTECTION

25. Nothing in this Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Agreement. EPA and the Settling Parties each reserve any and all rights (including, but not limited to, any right to contribution), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto.

26. EPA and the Settling Parties agree that the actions undertaken by Settling Parties in accordance with this Agreement do not constitute an admission of any liability by the Settling Party. The Settling Parties do not admit, and retain the right

to controvert in any subsequent proceedings other than proceedings to implement or enforce this Agreement, the validity of the facts or allegations contained in Section II of this Agreement.

27. The Parties agree that Settling Parties are entitled, as of the effective date of this Agreement, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Agreement. The "matters addressed" in this Agreement are Past Response Costs.

28. Settling Parties agree that with respect to any suit or claim for contribution brought by it for matters related to this Agreement, they will notify EPA in writing no later than 60 days prior to the initiation of such suit or claim. Settling Parties also agree that, with respect to any suit or claim for contribution brought against them for matters related to this Agreement, they will notify EPA in writing within 10 days of service of the complaint or claim upon them. In addition, Settling Parties shall notify EPA within 10 days of service or receipt of any Motion for Summary Judgment and within 10 days of receipt of any order from a court setting a case for trial, for matters related to this Agreement.

29. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, Settling Parties shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant not to sue by EPA set forth in Paragraph 20.

XI. RETENTION OF RECORDS

30. Until six years after the effective date of this Agreement, each Settling Party shall preserve and retain all records and documents now in its possession or control, or which come into its possession or control, that relate in any manner to response actions taken at the Site or to the liability of any person for response actions conducted and to be conducted at the Site, regardless of any corporate retention policy to the contrary.

31. After the conclusion of the document retention period in the preceding paragraph, Settling Parties shall notify EPA at least 90 days prior to the destruction of any such records or

documents, and, upon request by EPA, Settling Parties shall deliver any such records or documents to EPA. Settling Parties may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Settling Parties assert such a privilege, they shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted. However, no documents, reports, or other information created or generated pursuant to the requirements of this or any other judicial or administrative settlement with the United States shall be withheld on the grounds that they are privileged. If a claim of privilege applies only to a portion of a document, the document shall be provided to EPA in redacted form to mask the privileged information only. Settling Party shall retain all records and documents that they claim to be privileged until EPA has had a reasonable opportunity to dispute the privilege claim and any such dispute has been resolved in Settling Parties' favor.

32. By signing this Agreement, Settling Parties certify individually that, to the best of their knowledge and belief, it has:

a. not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability regarding the Site, after notification of potential liability or the filing of a suit against the Settling Parties regarding the Site; and

b. fully complied with any and all EPA requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e)

33. By signing this Agreement, Settling Parties agree to provide EPA with any and all requested non-privilege information currently in its possession, or in the possession of its officers, directors, employees, contractors or agents, which relates in any way to the ownership, operation or control of the Site, or to the ownership, possession, generation, treatment, transportation, storage or disposal of a hazardous substance, pollutant or contaminant at or in connection with the Site available to EPA. Any assertions by Settling Parties that a document is privilege will be subject to the requirements in paragraph 31.

XII. NOTICES AND SUBMISSIONS

34. Whenever, under the terms of this Agreement, notice is

required to be given or a document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing. Written notice as specified herein shall constitute complete satisfaction of any written notice requirement of this Agreement with respect to EPA and Settling Parties.

As to EPA:

Marlene J. Tucker
Environmental Accountability Division
Office of Legal Support
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

Luis Flores
North Site Remedial Branch
North Carolina Section
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

As to Settling Parties:

William H. Kitchens, Esq.
Arnall, Golden & Gregory, LLP
2800 One Atlantic Center
1201 W. Peachtree Street
Atlanta, Georgia 30309

Lisa Palumbo
Vice President & General Counsel
Rayonier Inc.
1177 Summer Street
Stamford, Connecticut 06904

XIII. INTEGRATION

35. This Agreement constitutes the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Agreement. The Parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Agreement.

XIV. PUBLIC COMMENT

35. This Agreement shall be subject to a public comment period of not less than 30 days pursuant to Section 122(i) of CERCLA, 42 U.S.C. § 9622(i). In accordance with Section 122(i)(3) of CERCLA, EPA may modify or withdraw its consent to this Agreement if comments received disclose facts or

considerations which indicate that this Agreement is inappropriate, improper or inadequate.

XV. ATTORNEY GENERAL APPROVAL

36. The Attorney General or her designee has approved the settlement embodied in this Agreement in accordance with Section 122(h)(1) of CERCLA, 42 U.S.C. § 9622(h)(1).

XVI. EFFECTIVE DATE

37. The effective date of this Agreement shall be the date upon which EPA issues written notice that the public comment period pursuant to Paragraph 35 has closed and that comments received, if any, do not require modification of or EPA withdrawal from this Agreement.

IT IS SO AGREED:

U.S. Environmental Protection Agency

By: Darce Ann Knight, CHMM
[Name]

for Chief, Programs Service Branch

12/31/98
Date

THE UNDERSIGNED SETTLING PARTY enters into this Agreement in the matter of SOUTHERN WOOD PIEDMONT SUPERFUND SITE., U.S. EPA Region 4. CERCLA Docket No. 99-01-C, located in Wilmington, New Hanover County, North Carolina:

FOR SETTLING PARTY: Southern Wood Piedmont
[Name]

P.O. Box 5447
[Address] Spartanburg, SC

By: [Signature]
[Name]

Dec 21, 1998
[Date]

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT



JAMES B. HUNT JR.
GOVERNOR

WAYNE MCDEVITT
SECRETARY

WILLIAM L. MEYER
DIRECTOR

April 28, 1999

Mr. Richard D. Green, Director
Waste Management Division
US EPA Region IV
Atlanta Federal Building
61 Forsyth St.
Atlanta, GA 30303-8960

Subject: State Deferral Request
Southern Wood Piedmont Co.
Wilmington, New Hanover County, NC
NCD 058 517 467

Dear Mr. Green:

In accordance with the Superfund State Deferral Memorandum of Agreement between US EPA Region IV and the State of North Carolina (MOA), we request your approval of the subject Southern Wood Piedmont - Wilmington site for State deferral. We understand that by deferral of this site to the State, EPA will defer consideration of the site for listing on the NPL, while the State oversees remedial activities conducted by the responsible parties under the attached Administrative Order on Consent (AOC). Currently, we believe that this site meets all of the eligibility requirements specified in the MOA. Key activities conducted to date are summarized below.

On October 7, 1997, the NC Superfund Section initiated negotiation of a site-specific State Deferral AOC with Southern Wood Piedmont Company (SWP), the potentially responsible party (PRP) at this site. During October 1997, SWP entered into negotiations with EPA for reimbursement of costs for past federal investigation of the site. On December 18, 1997, the NC Superfund Section received written confirmation from Southern Wood Piedmont committing to sign the State Deferral AOC upon settlement of EPA response costs as stipulated in the AOC.

Mr. Richard D. Green
April 28, 1999
Page 2

On January 12, 1999, the Superfund Section received documentation that SWP had reimbursed the US EPA for past response costs. This documentation is included as Attachment A of the attached AOC. On January 29, 1999, the Superfund Section received the original AOC signed by the signatories for Southern Wood Piedmont.

On February 24, 1999 the Superfund Section established a local public information repository at the New Hanover County Public Library Reference Desk, 210 Chestnut Street, Wilmington, NC. An index of the site documents currently available for review at the repository is attached. All site files are also maintained and available for review and photocopying by the public at the offices of the Superfund Section in Raleigh, NC.

The NC Superfund Section prepared a fact sheet describing the SWP Wilmington site, its history, the federal Superfund and State deferral processes, and opportunities for community involvement. The fact sheet listed State and EPA contacts, and the time and location of the deferral "kickoff" public meeting. On February 18, 1999, copies of the fact sheet were mailed to federal, state and local government officials, and to state and local citizens' groups and environmental organizations. On March 8, 1999, 1245 fact sheets were mailed to residents within 1/2 mile of the site. A copy of the fact sheet is attached.

Public notice of the proposed deferral was published in the *Wilmington Morning Star* on March 3, 1999, notifying the community of the "kickoff" public meeting scheduled for March 18. A copy of the notice is attached.

On March 18, 1999, prior to the public meeting, representatives of the NC Superfund Section and the State Ports Authority met with Wilmington Mayor Hamilton Hicks and City Planner Mary Gornto at Wilmington City Hall, to discuss any questions or concerns on the part of the city government regarding the proposed deferral. In discussion, it was agreed that potential access routes to lower Greenfield Creek might be posted, to reduce the likelihood of public exposure to site contaminants or consumption of potentially contaminated fish.

The March 18, 1999 public meeting was held at the New Hanover County Public Library in Wilmington. The meeting lasted approximately 2-1/2 hours and was attended by five NC Superfund Section personnel, two US EPA representatives, three PRP representatives, two State Ports Authority representatives, one county health department representative, and 9 members of the community. The meeting was recorded by a court reporter and a copy of the transcript of this meeting is attached. The meeting initiated the 30-day public comment period on the draft AOC and on the proposed deferral.

Mr. Richard D. Green
April 28, 1999
Page 3

On March 19, 1999, as requested by Ms. Helen Sidberry of the Wilmington Housing Authority, the NC Superfund Section held a public information session at the Charles T. Nesbitt Courts apartment complex on 2nd Street, the closest residential area to the site. The meeting was held for the benefit of residents of the complex who were unable to attend the public meeting the previous evening. Nine residents attended.

During the information session, the NC Superfund Section reiterated site-specific and regulatory information presented at the public meeting, and held an informal discussion with residents to hear their questions and concerns. During the meeting, additional anecdotal reports suggested that some local residents had fished lower Greenfield Creek, at its confluence with the Cape Fear River. The prospect of posting access routes to the creek against trespassing was also discussed at the session.

Comments received during the March 18 public meeting and responses from the State are summarized in an attached memorandum. None of the comments received during the meeting or during the March 19 information session were in direct opposition to the deferral. No public comment was received subsequent to the March 19 public information session. The 30-day public comment period ended April 17, 1999.

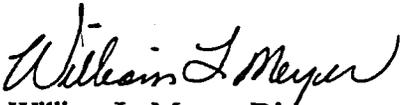
On April 20, 1999, the City of Wilmington City Council voted for a resolution (attached) supporting the proposed deferral of the site to State oversight. An attached newspaper article provides additional evidence of local community support. Based on the community response received to date, it appears that the community does not have significant, valid objections to deferring the SWP Wilmington site to the State.

Based on the events summarized above, we believe that the SWP Wilmington site meets the eligibility criteria established in the Superfund State Deferral Memorandum of Agreement (MOA). An amended Appendix B to the MOA is enclosed to replace the current Appendix B upon your approval of this State Deferral. This amendment simply lists the Southern Wood Piedmont Co.-Wilmington site under "Sites Deferred to the State of North Carolina". The State will sign the State Deferral AOC following EPA approval of the deferral.

Mr. Richard D. Green
April 28, 1999
Page 4

We appreciate all the assistance we have received from Region IV in support of the State Deferral program. We look forward to continuing to work closely with your staff on this site. If you have any questions, please contact Pat DeRosa or Stuart Parker at (919) 733-2801, Ext. 290 or 277, respectively.

Sincerely,


William L. Meyer, Director
Division of Waste Management

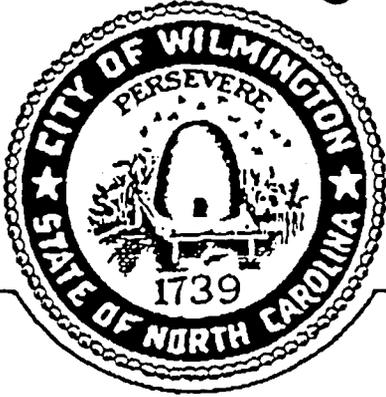
Attachments (9):

- Appendix B of Deferral MOA
- AOC signed by SWP
- Repository List of Documents
- Fact Sheet
- Public Notice
- Transcript of Public Meeting
- Memo on Public Meeting Comments
- Wilmington City Council Resolution
- Wilmington Morning Star* (On-line Edition) News Article

cc: Pat DeRosa
file

cc (letter only):

- William Arrants (Southern Wood Piedmont)
- Jack Butler
- Stuart Parker
- Rob Gelblum
- Phil Vorsatz (EPA Region IV)
- Luis Flores (EPA Region IV)
- Information Repository



CITY of WILMINGTON
North Carolina

P.O. BOX 1810
28402

OFFICE OF THE CITY MANAGER
(910) 341-7810

TDD (910) 341-7873

FACSIMILE TRANSMISSION COVER SHEET

FAX 910-341-5839

TO: STUART PARKER, 919-733-4811

FROM: Mary M. Gornto, City Manager

MESSAGE:

ATTACHED PLEASE FIND A COPY OF A
RESOLUTION APPROVED BY CITY COUNCIL ON
4/20/99, IN SUPPORT OF STATE DEFERRAL BY
EPA FOR THE SOUTHERN WOOD PIEDMONT
SITE. PLEASE CALL ME IF YOU HAVE ANY
QUESTIONS -

DATE: 4-21-99

NUMBER OF PAGES (including cover sheet): 2

Resolution



City Council
City of Wilmington
North Carolina

Introduced by: Mary M. Gornito

April 20, 1999

RESOLUTION IN SUPPORT OF THE EPA DEFERRAL TO THE STATE OF NORTH CAROLINA FOR OVERSIGHT OF THE REMEDIAL INVESTIGATION AND CLEANUP OF THE SOUTHERN WOOD PIEDMONT SITE

LEGISLATIVE INTENT/PURPOSE:

The Southern Wood Piedmont site, which the City sold to the North Carolina State Ports Authority in 1998, has been determined to be a candidate for the Federal Superfund National Priorities List due to creosote contamination. In 1985, Southern Wood Piedmont excavated surface and subsurface contaminated soils; in 1992 and 1993, groundwater monitoring wells were installed at the site. Sampling in 1994 and 1996 did indicate that wood treating chemicals had been historically released to groundwater beneath the site, but that contamination had not reached the Cape Fear River. At this time, it appears that there is little risk of the contamination causing a hazard to the public or the environment.

Southern Wood Piedmont has signed a draft administrative order of consent, which binds them to a schedule for the investigation and cleanup, and has also agreed to pay assessment and oversight costs and to finance the cleanup. The advantages of State deferral include time savings, reduced costs, and improved community access to site information. NCDNER held public meetings in Wilmington during March 1999 to inform interested citizens about the future disposition and remediation of the site.

RESOLVED:

That the Wilmington City Council does hereby support EPA's deferral to the State of North Carolina for the oversight of the remedial investigation and cleanup of the Southern Wood Piedmont site in Wilmington to aid in expediting the cleanup and redevelopment of the site.

Mayor Hamilton E. Hicks, Jr.

Adopted at a regular
meeting on April 20, 1999.

ATTEST:

City Clerk



CERTIFIED TO BE A TRUE COPY
Denelope Spicer-Sidbury
CITY CLERK

MEMORANDUM

To: File

Date: April 27, 1999

From: Stuart F. Parker, Hydrogeologist 
NC Superfund Section

Subject: Southern Wood Piedmont - Wilmington site
NCD 058 517 467
Wilmington, New Hanover County NC
Issues discussed at Proposed State Deferral
"Kickoff" Public Meeting, March 18, 1999.

SFP reviewed transcripts of the March 18, 1999 "kickoff" public meeting, held at the New Hanover County Public Library, in order to summarize issues raised during the meeting, and to ensure that no significant objections existed to proposed State Deferral of the Site. Following presentations by the Superfund Section and the US EPA, the following discussions occurred with individuals among the nine local residents who attended the meeting.

1) The first issue raised was occupational exposure of past on-site workers to site contaminants during the facility's operation.

Pat DeRosa explained that that issue was outside of the scope of Superfund, but that the State Division of Occupational Epidemiology could be contacted if there were concerns about clusters of disease occurrence.

2) An attendee asked about the extent of contamination, and whether the increasing number of contaminated samples discovered over time was an indication that the site was "getting worse".

SFP and Luis Flores explained that the scope of sampling events had increased since preliminary work during the 1990s (example: sampling in Greenfield Creek), and that as a result the site's contamination had become better understood over time. SFP noted that while the extent of contamination was fairly well characterized, additional sampling would be needed before cleanup could begin.

- 3) Concern was raised over the apparent conflict of interest in allowing the responsible party (Southern Wood Piedmont Co.) to do the work of characterizing and cleaning up the site.

SFP explained that the State would be authorizing and overseeing all of the PRP's assessment and remedial activities. Luis Flores and Pat DeRosa explained that PRPs were typically allowed to conduct voluntary action under agency oversight. The alternative, having the EPA do the work, would require federal cost recovery and possible litigation with the PRP, requiring use of federal money and lengthening the overall process. SFP explained that the authenticity of the data could be verified by oversight and by collection of split samples by the NC Superfund Section.

- 4) An attendee inquired whether initiation of site cleanup would require the the entire 31 months projected by Pat DeRosa during her presentation.

Pat DeRosa replied that the cleanup could begin sooner than 31 months, depending on how quickly certain activities were completed, such as the preparation, review and revision of reports. She pointed out that while the EPA's concurrence on the cleanup issues was desirable, the State would have final authority. Most important would be federal and state agreement on cleanup standards, which was written into the deferral program itself.

- 5) A resident who arrived late at the meeting expressed general concern about the revelation that contamination existed in the community, and the ability to clean it up.

SFP explained that once the extent of site contamination had been fully characterized, a number of potentially effective remedies were available to be evaluated for use at the site (Following closure of the meeting, SFP and Pat DeRosa spoke with this resident informally, explaining to her that site contaminants had not affected residential drinking water, and had not migrated to residential areas near the site. This discussion appeared to allay her concerns considerably.).

- 6) An attendee inquired as to the effectiveness of Southern Wood Piedmont's efforts to landfarm creosote-contaminated soils on site.

SFP explained that the landfarming activity, characteristically, had broken down some of the less complex hydrocarbons in the soil, but that the more complex compounds had remained at relatively unchanged levels. SFP noted that landfarming had never been favored by the State as a remedial technology, and that more active bioremediation technologies existed which were potentially more effective in treating contaminated soils.

No additional questions were raised, except whether a direct vote on the deferral was being solicited. Pat DeRosa clarified that the point of the meeting had been to raise issues and address any potential concerns or objections about the proposed State Deferral. No objections or additional concerns were raised subsequent to this discussion.

RECEIVED

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MAR 31 1999

SUPERFUND SECTION

KICKOFF PUBLIC MEETING

SOUTHERN WOOD PIEDMONT COMPANY

WILMINGTON, NEW HANOVER COUNTY

NORTH CAROLINA

MARCH 18, 1999

HELD AT THE NEW HANOVER COUNTY PUBLIC LIBRARY

REPORTED BY: Tracy Schell

Registered Professional Reporter

Notary Public -

1 MS. DEROSA: Okay. Well, let's get started then. 05:43:36
 2 Good evening, and I'd like to welcome everyone to the kick-off 06:05:18
 3 public meeting for the Southern Wood Piedmont site in 06:05:22
 4 Wilmington. My name is Pat DeRosa, and I'm with the State of 06:05:24
 5 North Carolina Department of Environment and Natural Resources 06:05:28
 6 Superfund Section. I'd like to thank you all for coming out 06:05:32
 7 tonight, and also like to thank the New Hanover County Public 06:05:34
 8 Library for making the room available to us for the meeting. 06:05:38

9 The purpose of the meeting tonight is really 06:05:42
 10 two-fold. The first thing we would like to do is discuss the 06:05:44
 11 environmental concerns at the Southern Wood Piedmont site, 06:05:48
 12 which is currently a vacant property located at the end of 06:05:52
 13 Greenfield Street. And second, we'd like to get some feedback 06:05:54
 14 from the community on the State's proposal to have the State 06:05:58
 15 manage and oversee the investigation and clean up of the site, 06:06:02
 16 rather than have the work overseed and managed by the U. S. 06:06:06
 17 Environmental Protection Agency in Atlanta. And this is known 06:06:10
 18 as State Deferral. 06:06:12

19 In addition to myself, we have two other speakers 06:06:14
 20 here tonight, Stuart Parker, who is also with the North 06:06:18
 21 Carolina Superfund Section. He's a state project manager for 06:06:22
 22 the site, and he'll be talking about the operational history 06:06:26
 23 and the concerns we have at the site. Also, Luis Flores with 06:06:30
 24 the U.S. Environmental Protection Agency. He's a remedial 06:06:32
 25 project manager who's been working closely with us on the 06:06:36

1 site. 06:06:42

2 Also here tonight in the audience we have Diane 06:06:42
3 Barrett who is also with the U.S. EPA. She's the community 06:06:44
4 relations coordinator for Region four; and Latent Bedsole, 06:06:50
5 who's with the North Carolina State Ports Authority, and the 06:06:54
6 Ports Authority is the current owner of most of the site. 06:06:58

7 As you can see from the agenda, we'll spend the 06:07:02
8 first 50 minutes going over the presentations just to give you 06:07:08
9 some information about the site. And then we'll have about 06:07:10
10 two hours, or until -- actually would like to try to close 06:07:14
11 about 8:30, because the library closes at 8:45, and we need to 06:07:18
12 take down the equipment, but we'd like to have plenty of time 06:07:22
13 for questions and comments after the presentations. 06:07:26

14 If you haven't already picked one up, we have a copy 06:07:28
15 of the fax sheet on the back table over there, and there's 06:07:30
16 also a copy of all of the slides that we're going to show back 06:07:34
17 there as well. You might want to pick one up. Also, on the 06:07:38
18 attendance list, if you can please indicate if you want to be 06:07:42
19 on our mailing list if you're not already on it, so we can 06:07:44
20 make sure that you get any subsequent fact sheets or mailings 06:07:48
21 about the site. 06:07:52

22 The meeting tonight is being recorded by a court 06:07:54
23 reporter, Tracy Schell. And since we wanted to record the 06:07:58
24 whole meeting, if she needs to break, we might call a time out 06:08:02
25 and take a break, so we can make sure we get everything on the 06:08:04

1 record. The transcripts for the meeting we'll be available 06:08:08
 2 here at the New Hanover County Public Library, which is the 06:08:10
 3 local information repository located at the reference desk. 06:08:16
 4 And if you need some more information about the times, times 06:08:18
 5 are up here, but some more information on the fact sheet. We 06:08:24
 6 also have a repository at the North Carolina Superfund Section 06:08:26
 7 office in Raleigh if that's more convenient for you. 06:08:30

8 At about 6:50 we'll open it up for questions and 06:08:34
 9 comments. And if you have a question, please raise your hand, 06:08:38
 10 so we can acknowledge you. And if you wish to speak, stand up 06:08:42
 11 and state your name, and affiliation for the record. This way 06:08:46
 12 in case we need to get back with you to respond to any of your 06:08:48
 13 questions and comments, we can do so. 06:08:52

14 And for those of you who would prefer to submit 06:08:54
 15 comments in writing rather than verbally, on the very last 06:08:56
 16 page of the handout there's a form that you can fill in for 06:09:00
 17 comments and questions, and there's a box back there you can 06:09:04
 18 drop them off on your way out. There's also some pens back 06:09:08
 19 there if you need those. 06:09:12

20 Next I would like to introduce Stuart Parker with 06:09:14
 21 the North Carolina Superfund Section. Stuart is going to tell 06:09:18
 22 us about the operating history and the environmental concerns 06:09:20
 23 at the site. 06:09:24

24 MR. PARKER: Is there anyone here who doesn't know 06:09:26
 25 where the site is located? We have a slide which can 06:09:42

1 illustrate that more clearly. Would anyone like to see that? 06:09:46

2 Any questions on that? 06:09:48

3 All right. As Pat said, my name is Stuart Parker. 06:09:52

4 I'm with the North Carolina Superfund Section. I've worked 06:09:54

5 there six years doing site assessments for the EPA. And the 06:09:58

6 topics we're going to cover at this presentation are what 06:10:06

7 hazardous substances are present at the site, and also what 06:10:10

8 their potential human health and environmental concerns are. 06:10:12

9 The site itself is located on Greenfield Street 06:10:16

10 between Front Street and Cape Fear River. It consists of 93 06:10:20

11 acres of property owned by the State Ports Authority, and 06:10:22

12 three acres privately owned in the southeast corner of the 06:10:26

13 site. The State Ports Authority recently purchased the 06:10:28

14 northern portion of the site from the City of Wilmington. 06:10:32

15 As far as the site history goes, prior to 1932 the 06:10:38

16 site was used primarily to construct concrete barges. From 06:10:40

17 1932 to 1935 the site was first used for wood treating by the 06:10:46

18 North State Treating Company. From 1935 to 1969 Taylor 06:10:50

19 Colquitt leased the northern portion of the site from the city 06:10:58

20 of Wilmington for wood treating. 06:10:58

21 From 1969 to 1971 the company ITT operated the site 06:11:12

22 also as a wood treating facility, and Southern Wood Piedmont 06:11:16

23 formed under ITT in 1971. The facility closed in 1983. 06:11:20

24 As far as future site use is concerned, the State 06:11:28

25 Ports Authority hopes to use this site to expand its existing 06:11:30

1 storage facilities.

06:11:34

2 As far as specific facility operations that we know
3 of, from 1932 to 1983 the site was used for creosote wood
4 treatment. And from 1972 to 1983 the substance Chromated
5 Copper Aresenate or CCA was also used for wood treatment. In
6 1980 to 1983 Pentachlorophenol was also used. In 1985
7 Southern Wood Piedmont excavated visibly contaminated soil at
8 the site under a state consent order.

06:11:38
06:11:40
06:11:48
06:11:56
06:11:58
06:12:14
06:12:18

9 Now, soils contaminated -- heavily contaminated with
10 arsenic were disposed of in an off-site facility, and soils
11 that were contaminated with creosote were landfalled in the
12 north central portion of the site, which you can see if you
13 look at the standing diagram on the site in the overhead
14 screen.

06:12:20
06:12:24
06:12:28
06:12:30
06:12:32
06:12:36

15 And from 1990 to 1996 various contractors employed
16 by Southern Piedmont have performed extensive environmental
17 sampling at the site. In 1986 the EPA first took soil samples
18 of the site, and subsequently in 1995 I conducted the site
19 inspection prioritization, which is a stage in the Superfund
20 assessment process. In 1997 the EPA contracted to perform
21 what's known as an expanded site inspection on the site, which
22 involved additional sampling to confirm existing data.

06:12:40
06:12:46
06:12:52
06:12:56
06:13:00
06:13:04
06:13:12
06:13:16

23 Hazardous chemicals which were used or are currently
24 remaining at the site include, as mentioned before, creosote,
25 arsenic, Pentachlorophenol or PCP, and as a byproduct of PCP

06:13:22
06:13:26
06:13:30

1 Dioxins. 06:13:36

2 Creosote is used to protect and preserve rail road 06:13:40
3 ties and other timber products usually cut into timber ties. 06:13:44
4 It's manufactured be distillation of coal tar, and has a 06:13:48
5 yellow, brown color, and a tar asphalt odor, which is quite 06:13:52
6 distinctive. It can volatilize or emit vapor when heated, 06:13:56
7 when concentrated, or in close spaces. And it contains a 06:14:00
8 class of chemical compounds known as polynuclear aromatic 06:14:04
9 hydrocarbons, or PAH. 06:14:10

10 Arsenic is present at the site as a byproduct of 06:14:14
11 Chromated Copper Arsenate. CCA is typically used to pressure 06:14:18
12 treat lumber such as used in building decks. 06:14:22

13 Pentachlorophenol is used for purposes similar to 06:14:28
14 creosote. The majority of wood power poles is treated with 06:14:30
15 PCP. It's applied using petroleum as a carrier substance. As 06:14:34
16 far as we know it tends to break down in sunlight. It's 06:14:38
17 largely absent in soils in the site where we've tested for it. 06:14:42
18 And if -- as a byproduct it was manufactured, it contains some 06:14:46
19 low levels of dioxins. 06:14:52

20 Dioxins, as I said, are trace contaminate of PCP. 06:14:56
21 Their human health effects are under investigation. The 06:15:00
22 materials are considered highly toxic. They're not volatile. 06:15:04
23 They don't volatilize, but they do tend bind into soil and 06:15:08
24 sediment. There are several species of Dioxins, but these 06:15:16
25 species 2, 3, 7, 8 Tetrachlorodibenzodioxin or TCDD is the 06:15:18

1 most regulatory concern. 06:15:24

2 As far as the potential effects of these site 06:15:30
3 contaminates, any of these contaminates can cause chronic 06:15:34
4 human health effects given long term exposure at sufficient 06:15:36
5 high concentrations. I'll get into the possible roots of 06:15:40
6 exposure later in this presentation. These compounds can be 06:15:44
7 ecologically toxic to wetland communities, animals, and 06:15:52
8 plants, and they have the potential to accumulate in the 06:15:52
9 aquatic food chain much in the way that DET was a problem 06:15:58
10 historically, building up in the eagles, fish eating birds. 06:16:02

11 Places on site where residual soil contamination has 06:16:12
12 been identified includes the wood treating areas on the site, 06:16:18
13 which are located on the roughly squarish areas on the east 06:16:20
14 side of the site, and also near the water front, and what's 06:16:22
15 known as the covered ditch area which was -- which contained a 06:16:26
16 large amount of creosote and subsequently excavated and 06:16:30
17 backfilled. The wood storage areas -- I'm sorry, the wood 06:16:32
18 treating areas of the site in the south central area and in 06:16:40
19 areas where, as I've said before, soils were landfarmed in 06:16:44
20 their attempt to get the rid of the creosote waste. 06:16:50

21 Now, I'm going to talk about the potential exposure 06:16:56
22 pathways from the site. Surface water pathway is the greatest 06:16:58
23 concern to us. It's primarily a potential human health and 06:17:04
24 environmental concern in the site affecting -- potentially 06:17:08
25 affecting fishing on the site and also wetland areas. There 06:17:12

1 are two drainage pathways from the site. The first being 06:17:14
2 direct or on-site drainage -- the on-site drainage ditch 06:17:20
3 across from the site that's visible. Just a minute. Everyone 06:17:24
4 see that? This is Greenfield Creek which leads -- this is 06:17:34
5 south of the site. Water flows out of Greenfield Lake to 06:17:36
6 Greenfield Creek. Surface drainage of the site passes down 06:17:42
7 this drainage ditch, and also Greenfield Creek. Greenfield 06:17:44
8 Creek empties into the Cape Fear River. 06:17:48

9 So, there are really two ways for contaminates to 06:17:52
10 get on the site are the waterways. One is direct run-off or 06:17:56
11 scouring of soil which we're not observing happening these 06:18:00
12 days, because the site is vegetated, and the other is by 06:18:04
13 flooding of the Cape Fear River. The Cape Fear River 06:18:08
14 periodically floods the site, which is in the 100 year flood 06:18:12
15 plane, or a portion of it. 06:18:18

16 As far as the contamination that we know about 06:18:22
17 currently occurs in the surface water pathway. It's been 06:18:24
18 determined by multiple sampling efforts that there is some 06:18:26
19 creosote contamination sediments in the site's drainage ditch 06:18:30
20 and down stream of the drainage ditch in Greenfield Creek. 06:18:36
21 There's also the possibility of creosote contamination in the 06:18:40
22 Cape Fear River sediments directly adjacent to the water 06:18:42
23 front, which you can see is the dotted line at the west edge 06:18:46
24 of the site, the undulating line there, although that has yet 06:18:50
25 to be confirmed. And also possibly at the mouth of Greenfield 06:18:54

1 Creek.

2 Now, I want to emphasize that Greenfield Lake that
3 the park land is to the southeast of the site has suffered no
4 effects as a result -- is not considered a potential receptor
5 of any contaminates from the site by virtue of the fact that
6 it's upstream.

7 What are the concerns about the surface water
8 pathway. There's the potential for build up of contaminates
9 in fish or other animals in the Greenfield Creek areas that
10 are contaminated. Now, we don't actually know if that's
11 occurred. What little sampling data we have to date is
12 inconclusive. We have to conduct additional investigations to
13 determine whether that potential actually exists.

14 Greenfield Creek has been used in the past for
15 fishing and crabbing. It remains to be seen how much it's
16 going to be used in the near future, how much it's currently
17 being used. That's one of the things we're trying to get
18 feedback from the public about, particularly residents living
19 near the site. Again, wetlands could be affected. And then
20 beyond Greenfield Creek is the Cape Fear River, and there's
21 potential, again, for sensitive environments such as wetlands,
22 rare species, and the fishing industry be affected by the
23 site, although again we don't know to what extent that
24 potential could be realized.

25 The secondary concern is the ground water pathway of

1 the site. This is because there has been no apparent impact 06:20:30
2 on the drinking water supplies by the site. And, 06:20:32
3 because there's a potential concern about migration of ground 06:20:40
4 water contaminates to surface water by discharge. Currently 06:20:46
5 we've determined there are two water-bearing sand layers which 06:20:54
6 lie beneath the site. These are each about 10 to 15 feet 06:20:58
7 thick. They are underlain by a bedrock aquifer. But ground 06:20:58
8 water in the sand aquifers is also affected by the Cape Fear 06:21:04
9 River tides. Cape Fear River is a tidal estuary, and as the 06:21:08
10 water rises in the waterway, then the ground water within the 06:21:14
11 sand layer shifts. 06:21:18

12 Now, east of the site we're not that concerned about 06:21:20
13 ground water, because we believe it's an area of higher 06:21:24
14 elevation, and we expect that ground water east of the site 06:21:28
15 will flow toward the site of Cape Fear River and Greenfield 06:21:32
16 Creek. So we don't believe there's a potential of subsurface 06:21:36
17 contamination surrounding the community as a result of the 06:21:40
18 site. 06:21:42

19 What we know about ground water contamination is 06:21:44
20 that a liquid creosote product has accumulated at the base and 06:21:50
21 the upper sand aquifer at approximately 10 to 15 feet beneath 06:21:50
22 the former production and covered ditch areas of the site. 06:21:56
23 That's in the east central portion of the site. We also know 06:21:58
24 that some residual creosote is present in soils beneath -- 06:22:02
25 beneath former above ground storage tank areas that are close 06:22:08

1 to the water front. There doesn't appear to be as much
 2 product in this area in residual creosote soils. And we know
 3 that ground water in both the sand aquifers contains dissolved
 4 creosote compounds.

06:22:12
 06:22:16
 06:22:20
 06:22:24

5 What are the effects of this? Well, we don't know
 6 of any drinking water wells near the site except for one
 7 artisan spring at Greenfield Lake, which is up gradient of the
 8 site and not much of an effect on it. Wilmington's municipal
 9 water comes from the Cape Fear River at Riegelwood,
 10 approximately 20 miles upstream. And there -- as I said,
 11 there's a slight potential for ground water seepage to
 12 transport contaminants to the drainage ditch at Greenfield
 13 Creek from the Cape Fear River.

06:22:28
 06:22:30
 06:22:36
 06:22:40
 06:22:46
 06:22:46
 06:22:48
 06:22:52
 06:22:56

14 On the site there is a certain amount of soil
 15 exposure hazard. Soil contamination on the site exceeds
 16 limits that were set by the EPA for human exposure in either
 17 industrial settings or residential settings. And also the
 18 contaminate levels in the soils exceed the State remediation
 19 goals for soil. Exposure to contaminated soil or sediment can
 20 occur only at the site property in the proper boundaries, or
 21 downstream of the site in the bed of the creek. Off site
 22 residents don't have to be concerned about exposure.

06:23:00
 06:23:02
 06:23:08
 06:23:14
 06:23:20
 06:23:24
 06:23:26
 06:23:30
 06:23:34

23 Contaminant concentrations in the on-site soils are
 24 generally parts per million. The dioxin and arsenic residues
 25 that are on the site are not-volatile, and we don't believe

06:23:46
 06:23:48
 06:23:52

1 they present an air pollution hazard. Creosote in undisturbed 06:23:54
2 soil at the site is not concentrated enough to produce 06:24:00
3 measurable amounts of air pollution. Again, this is in the 06:24:06
4 low parts per million range. 06:24:12

5 The site is vegetated, so we don't have to worry 06:24:14
6 presently about wind-blown dust transporting contaminants off 06:24:16
7 the site to other areas. And there is the potential during 06:24:22
8 future construction or excavation that workers working on the 06:24:28
9 site could be exposed to the site contaminants, so probably 06:24:30
10 would require safety monitoring in the event of construction 06:24:34
11 activities.

12 So in summary, contaminants present at the site are 06:24:42
13 wood-treating chemicals and their byproducts are creosote, 06:24:46
14 arsenic, and dioxins. These substances have been found in 06:24:50
15 soil and groundwater at the site, and they've also migrated to 06:24:52
16 drainage pathways leading from the site. Although, the 06:24:56
17 presence of certain chemicals such as dioxins hasn't been 06:25:00
18 determined yet. It's only limited sampling at the site, and 06:25:02
19 we don't know to what extent the dioxin contaminations 06:25:08
20 occurred elsewhere. 06:25:12

21 Important point, again, is people located off the 06:25:14
22 site are not at risk for exposure to site contaminants by way 06:25:16
23 of ground water, soil, or air. Potential concerns are that 06:25:20
24 people working or trespassing on the site could be exposed to 06:25:24
25 site contaminants by contacting or swallowing soil accidentally. 06:25:28

1 This hazard would be increased during future site development
 2 for on-site workers. We're concerned about the contamination
 3 of Greenfield Creek sediments, which may potentially pose a
 4 health hazard for people who regularly consume fish or other
 5 animals from the lower creek.

06:25:34
 06:25:36
 06:25:40
 06:25:46

6 No, again, I emphasize. We don't actually know that
 7 the fish are affected by the contaminants that are present at
 8 the site. There is no contaminants present in the water
 9 column itself. And, again, I emphasize that Greenfield Lake
 10 is a popular recreational area is not affected by this site.

06:25:50
 06:25:52
 06:25:54
 06:25:58
 06:26:02

11 So in conclusion, we need to address contamination
 12 at the Southern Wood Piedmont site. We need to take
 13 appropriate action to protect human health, and the
 14 environment. The State of North Carolina has an active
 15 interest both addressing the site's potential chemical hazards
 16 and returning the site to productive use.

06:26:06
 06:26:14
 06:26:16
 06:26:18
 06:26:20
 06:26:26

17 MS. DEROSA: Thank you, Stuart. Before we go on, I
 18 wanted to -- some of you may have some questions of Stuart
 19 about the specifics about the site, and any environmental
 20 concerns, the operation history. And if you would just,
 21 please, hold those questions until after all the
 22 presentations, we should have plenty of time to address them.
 23 We do want to hear your questions and comments, so please
 24 stick around for that, and we'll try to go through the rest of
 25 this as quickly as possible.

06:26:48
 06:26:50
 06:26:54
 06:26:56
 06:27:00
 06:27:02
 06:27:04
 06:27:08
 06:27:10

1 In additional to talking about the environmental 06:27:12
2 concerns of the site, the second purpose for the meeting 06:27:14
3 tonight is to determine whether the community supports our 06:27:18
4 proposal to have a State managed investigation of clean up of 06:27:20
5 the site under our state authorities, rather than having that 06:27:26
6 done under the Federal Superfund Program. And this is, as I 06:27:28
7 mentioned earlier, is known as State Deferral. But before EPA 06:27:32
8 can defer the site to the State, the State must show that the 06:27:36
9 community supports or accepts the deferral. And so if the 06:27:40
10 community has any significant unresolvable objections to the 06:27:42
11 deferral, then EPA would not permit the deferral to go 06:27:46
12 forward. So, the purpose of the meeting here tonight is also 06:27:52
13 to hear any concerns or objections to the deferral, and I want 06:27:56
14 to try to explain the process, so you will know whether or not 06:27:58
15 you think it's a good idea. 06:28:02

16 If the EPA is to oversee the clean up, the site 06:28:06
17 would first have to be put -- basically identified as a 06:28:10
18 national priority for clean up, and be put on a list called 06:28:14
19 the National Priorities List. Then once the site is on the 06:28:20
20 list, EPA could then proceed with any further investigation of 06:28:22
21 clean up of the site. Currently we estimate it would take 06:28:26
22 about 12 months from tonight to get the site listed on the 06:28:30
23 National Priorities List. 06:28:34

24 And alternatively we're proposing the State Deferral 06:28:36
25 option, in which case the State would oversee the work, and 06:28:38

1 the site would not have to be put onto the list. 06:28:42

2 What I want to discuss with the second half of the 06:28:48
3 program, then, are first to explain the Federal Superfund 06:28:52
4 process, then explain the State Deferral process, compare the 06:28:56
5 two processes, and discuss benefits as we see them of 06:29:00
6 deferral, and then open the floor up to questions. So with 06:29:04
7 that, I would like to introduce Luis Flores with the U.S. EPA, 06:29:06
8 Remedial Project Manager, and he'll talk about the Federal 06:29:14
9 Superfund. 06:29:14

10 MR. FLORES: All right. Thanks, Pat. I was asked 06:29:26
11 by Pat and Stuart to present a brief overview of the Superfund 06:29:30
12 process. Well, the Superfund process, as I tried to summarize 06:29:38
13 it there, is actually a little bit more complicated than that, 06:29:58
14 but in general that's basically what the Superfund law tell us 06:30:04
15 to do. So for this presentation, I basically have divided the 06:30:10
16 whole Superfund program in eight important milestones. So 06:30:16
17 those milestones are the ones showing in the boxes in the 06:30:26
18 center of the overhead. 06:30:30

19 You see the first one is basically the site. 06:30:36
20 discovery. You know, know where the site is and know that 06:30:38
21 there are potential for contaminates to be present on site. 06:30:44
22 After the site is discovered, there's actually three 06:30:52
23 intermediate steps, which we have already done on this site, 06:30:56
24 which is the preliminary assessment site inspection 06:31:02
25 prioritization, and the expanded site inspection, which is 06:31:08

1 conducted in most sites to collect data graphs for the ESI. 06:31:12

2 So the purpose of conducting these intermediate 06:31:24

3 steps is to collect site data to determine the priority for 06:31:26

4 clean up of the site in relation with other sites around the 06:31:32

5 nation. So the way the priority for clean up of the site is 06:31:34

6 calculated is using the -- what is called the hazard ranking 06:31:42

7 system, or HRS, which is a group of mathematical formulas in 06:31:46

8 where all of the data collected during the investigations are 06:31:52

9 plugged into these formulas, and at the end we end with a 06:31:58

10 number that is called the site score. If the site score is 06:32:00

11 more than 28.5, then the site qualifies to be included in the 06:32:06

12 National Priorities List, which is the list that Pat 06:32:10

13 mentioned. It's basically a list that includes all sites in 06:32:14

14 the nation that their final score is above 28.5. And this 06:32:22

15 28.5 is kind of a magic number, but that's the number that the 06:32:26

16 Superfund law tells us to use. 06:32:34

17 So, basically, at this point in this specific site 06:32:38

18 we are in between Box 1 and Box 2. So as Pat mentioned we 06:32:42

19 have two alternatives. If, we go through the Federal 06:32:50

20 Superfund process that is shown in that overhead, and in that 06:32:54

21 case we will have to prepare a ranking package, which will be 06:33:00

22 Box No. 2 to propose the site to be included in this National 06:33:06

23 Priorities List. 06:33:14

24 Pat mentioned that it probably will take around 11 06:33:14

25 to 12 months, basically, a year to have the site final with 06:33:18

1 the FDL. After that happens, the EPA will conduct the 06:33:24
2 remedial investigation, which basically will be collect 06:33:28
3 samples to determine the extent of the contamination at the 06:33:32
4 site, and that is Box No. 3. 06:33:40

5 At the end of that a report will be prepared, which 06:33:42
6 is the remedial investigation report, which we're going to use 06:33:46
7 to prepare a feasibility study, which is Box No. 4. This 06:33:50
8 feasibility study is basically a study that weighs the 06:33:56
9 different potential alternatives that can be used to address 06:34:04
10 the contamination at the site and cleaning it up. 06:34:08

11 So after the feasibility study is reported, there's 06:34:14
12 another intermediate steps in between Box 4 and 5, where EPA 06:34:18
13 will issue what we call a proposed plan. That proposed plan 06:34:24
14 has the -- or presents to the public EPA's preferred 06:34:28
15 alternative for clean up. So basically includes their 06:34:32
16 recommendation that EPA is proposing to clean up the site, and 06:34:38
17 it will go to all of the people that are interested on the 06:34:42
18 site. We will mail that to them. 06:34:48

19 And at that point we'll start a public comment 06:34:52
20 period where usually for 30 days where people will submit 06:34:56
21 comments on the proposed alternative that EPA is proposing. 06:35:02
22 It can also be extended if the public needs more time for 06:35:06
23 another 30 days, so it will be like 60 days. 06:35:10

24 After that, after we have addressed all of the 06:35:14
25 questions and comments that we received during the public 06:35:18

1 comment period, we will prepare what we call the record of 06:35:24
2 decision, which is the document that documents the alternative 06:35:26
3 that we are selecting to clean up the site. 06:35:32

4 After we have the record of the decision documenting 06:35:38
5 what alternative is, we will have to design that alternative, 06:35:42
6 and that usually takes like another year to design the 06:35:48
7 alternative before we can implement the alternative on Box No. 06:35:52
8 8, which will be basically the actual clean up. 06:35:58

9 And as I said in the beginning, it's kind of 06:36:04
10 -simplified -- or that overhead simplifies the whole Superfund 06:36:10
11 process. And you're probably wondering why those other three 06:36:16
12 boxes that are there, the one that says removals. Well, it's 06:36:20
13 part of the things that we have to do throughout the whole 06:36:24
14 process that makes it not that simple. Removal basically 06:36:28
15 stands for, you know, at any time during the investigation. 06:36:34
16 For example, if we find out that a removal action is needed, 06:36:38
17 the EPA will move to the site, and you know, excavate the soil 06:36:42
18 or whatever, if it's warranted. Not that that's the case 06:36:46
19 here, I don't believe, but it's just in general. 06:36:50

20 Also, the box that says enforcement, that basically 06:36:54
21 is -- we will have to be conducting some enforcement actions 06:37:02
22 throughout the whole process also to determine who is actually 06:37:08
23 going to clean up the site, who is going to pay for the clean 06:37:14
24 up, and how that's going to be done. So basically, that's 06:37:16
25 where all of the attorneys come in place, on board, and so, I 06:37:22

1 said makes the whole process a little bit more difficult. And 06:37:2
2 we also have to do community relations that we will -- we 06:37:3
3 always do to maintain or keep all of the community informed of 06:37:40
4 all of the activities that we are doing. 06:37:45

5 So, basically in summary, that's the Federal 06:37:48
6 Superfund process, and I think that will -- we will take 06:37:52
7 questions at the end. 06:37:58

8 MS. DEROSA: Thanks, Luis. 06:38:08

9 Next I would like to take a few minutes to talk 06:38:10
10 about the State Deferral process. And first I want to give a 06:38:12
11 little bit more in depth definition of State Deferral. State 06:38:22
12 Deferral is a program -- a program by which EPA can defer 06:38:26
13 listing a site on the National Priorities List while the State 06:38:38
14 oversees, and manages the remedial investigation, and clean up 06:38:42
15 of the site. 06:38:46

16 Oops, sorry. Hit my mouse button by mistake. ~ 06:38:48

17 While the clean up is conducted by the responsible 06:38:54
18 parties at the site, those are the parties that are 06:38:56
19 responsible for the contamination at the site. 06:38:58

20 And this is a fairly new program for us. In 1995 06:39:02
21 EPA first published their guidance on the deferral program, 06:39:06
22 how a program like this could be set up. In 1997 the State 06:39:12
23 EPA agreed that the states had the authority and technical 06:39:18
24 expertise and the resources to oversee site clean ups and 06:39:24
25 establish the process of doing this. This process is set out 06:39:28

1 in a legal document, which is known as the Memorandum of 06:39:32
2 Agreement or MOA, and this document, if you're interested in 06:39:36
3 looking at it, is available in the repository here at the 06:39:38
4 library. 06:39:42

5 The first step in the process -- oh, I did want to 06:39:44
6 mention. We do have another site that we are working on under 06:39:46
7 our State Deferral program if anyone is interested. It's the 06:39:52
8 SBM Proctor Silex site in Southern Pines. So if you wanted to 06:39:58
9 talk to some of the community in Southern Pines about that 06:40:00
10 site, I can pass that information onto you as far as the 06:40:04
11 contact people's names. 06:40:06

12 The first step in the deferral process is signing of 06:40:10
13 an Administrative Order on Consent. And this is a legal 06:40:12
14 document between the State and the responsible parties, in 06:40:18
15 this case, Southern Wood Piedmont, in which the responsible 06:40:20
16 parties agree to conduct and pay for the investigation and 06:40:24
17 clean up of the site as needed. And this document is -- has 06:40:26
18 been signed by Southern Wood Piedmont. It won't be signed by 06:40:32
19 the State until we have taken comments from the community for 06:40:36
20 30 days, and this order is available for your review here at 06:40:40
21 the library as well, if you would like to take a look at it. 06:40:42

22 After the Administration Order on Consent is 06:40:50
23 finalized, and assuming that the EPA grants the deferral to 06:40:52
24 us, then the next step would be submittal of a remedial 06:40:56
25 investigation report. And this report in this case, Southern 06:41:00

1 Wood Piedmont and EPA and the State have conducted a 06:41:06
 2 significant amount of work at the site already. So the first 06:41:08
 3 report that we will receive from Southern Wood will summarize 06:41:10
 4 all of the work that is being conducted at the site so far. 06:41:12
 5 And these findings will be due to us 30 days after the AOC is 06:41:14
 6 finalized. And this report will basically summarize, based on 06:41:16
 7 the information that's been gathered so far, what is known to 06:41:18
 8 be the extent of contamination at the site. And then the 06:41:20
 9 State and EPA will review the document. The document will be 06:41:22
 10 revised accordingly as the State and EPA submit comments on 06:41:24
 11 the document to Southern Wood. 06:41:26

12 The next step would be submittal of a supplemental 06:41:54
 13 investigation work plan, and this would only be case if 06:42:00
 14 additional sampling is needed at the site. If we think 06:42:02
 15 additional sampling is needed, then Southern Wood Piedmont and 06:42:04
 16 their consultants will develop a work plan to address any data 06:42:06
 17 gaps that we have identified in the work that's been done so 06:42:08
 18 far. And this work plan would basically include things like 06:42:10
 19 additional sampling plan, if there needs to be a well survey 06:42:12
 20 done, if there has not been a complete identification of 06:42:14
 21 wetlands, any other work that needs to be done at the site. 06:42:16
 22 Again, this will be submitted to EPA, and the State for 06:42:18
 23 review, and the company will revise the work plan as we see 06:42:20
 24 fit. 06:42:22

25 The next step, once they've got the work plan 06:42:42

1 finalized, will be to actually conduct the work study out and 06:42:44
2 the work plan. And this will be the supplemental remedial 06:42:48
3 investigation. And again, this is conducted by the 06:42:52
4 responsible parties. The State will be overseeing the field 06:42:56
5 work conducted at the site, and the results of the work will 06:42:58
6 be put together into a report known as the Supplemental 06:43:04
7 Remedial Investigation report, which will be sent to EPA and 06:43:08
8 the State for review. And then this report, in addition to 06:43:14
9 the initial report that was submitted, should give a complete 06:43:18
10 picture of any contamination concerns that are at the site. 06:43:20

11 The next step in the process after the report is 06:43:28
12 completed and the extent of contamination is known, is the 06:43:34
13 proposed remedial action plan, which is prepared by the 06:43:40
14 responsible parties, and this plan describes the alternatives 06:43:42
15 for cleaning up the site to meet the preliminary clean up 06:43:48
16 goals that are established by the State. And if you'll look 06:43:52
17 at Luis's slide, this step is analogous to what the EPA calls 06:43:56
18 a feasibility study. 06:44:00

19 In addition to looking at all of the options for 06:44:02
20 cleaning up the site, the responsible parties will propose a 06:44:06
21 preferred remedy they see as the best alternative to address 06:44:10
22 the contamination at the site, and also include a preliminary 06:44:14
23 design for that remedy. And that proposed plan will then be 06:44:20
24 reviewed by the State, and the EPA will be copied, and they'll 06:44:24
25 submit comments on that as well. 06:44:28

1 However, before a remedy is selected, the State will 06:44:32
2 hold another public meeting, and there will be another 30-day 06:44:36
3 comment period on the proposed plan, at which point we would 06:44:40
4 welcome comments from the community on the proposed remedy 06:44:44
5 that the company has indicated as a preferred remedy, and the 06:44:48
6 State, EPA believes also to be the preferred remedy. And we 06:44:54
7 will address any of the comments that we receive during the 06:45:00
8 public comment period, and revise the remedial action plan and 06:45:04
9 the deferred plan as needed based on the comments that we 06:45:08
10 receive. 06:45:12

11 The next step would be to finalize the remedial 06:45:14
12 design for the selected remedy, and then finally to begin the 06:45:16
13 remedial action of the clean up. 06:45:20

14 This slide is just to show the comparison between 06:45:24
15 the State Deferral and the Federal Superfund programs, and 06:45:28
16 they are really very analogous programs. This is just to kind 06:45:32
17 of point that out. In both cases the Governmental Agency or 06:45:38
18 the State, or EPA enters into an agreement with responsible 06:45:40
19 parties known as the Administrative Order of Consent, and then 06:45:46
20 the next step is the remedial investigation phase in which -- 06:45:48
21 there's a slight difference here in that in the State's case 06:45:58
22 we call it an RI, a supplemental remedial investigation. And 06:46:00
23 in the case of the federal program, they submit they're 06:46:06
24 remedial investigation, and feasibility study looking at the 06:46:08
25 options for clean up at the same time. 06:46:12

1 Our remedial action plan, which is the next step, 06:46:14
2 would include that feasibility stage. And then the fourth and 06:46:16
3 fifth steps are really very similar in that there's a public 06:46:22
4 comment period on the proposed remedy, and the remedy is then 06:46:26
5 selected. And then the last step being that there's a 06:46:32
6 remedial design phase, and there's beginning of the remedial 06:46:34
7 action on clean up at the site. 06:46:40

8 This is a time line just kind of giving you an idea 06:46:42
9 of how long this all takes from tonight till the time that the 06:46:44
10 remedial action gets started. In the case of the State 06:46:50
11 Deferral program, we estimate it would be about 31 months from 06:46:52
12 today that the clean up would actually get started. And this 06:46:56
13 is just to show a comparison between the two options for 06:47:04
14 addressing the site. These are our best estimates. Sometimes 06:47:08
15 things take longer, sometimes things take shorter, but these 06:47:12
16 are just kind of estimates. For the deferral program, we 06:47:16
17 estimate, as I just indicated, 31 months from tonight starting 06:47:18
18 remedial action. 06:47:22

19 If the site has to be first listed on the National 06:47:24
20 Priorities List, and then go through the Federal Superfund 06:47:28
21 process, we estimate it would take about 47 months before the 06:47:30
22 remedial action could get started. 06:47:36

23 What are the similarities between the two programs? 06:47:40
24 Well, we just talked about the processes being very similar. 06:47:42
25 Both processes maintain the polluter pays concept in that the 06:47:46

1 parties responsible for the contamination would then have to 06:47:54
2 pay for addressing the investigation and clean up of the site. 06:47:56

3 The State clean up levels at the State Deferral site 06:48:00
4 must be at least as protective as those that would be imposed 06:48:04
5 if EPA was managing the clean up, and I want to stress that. 06:48:10
6 This clean would not be in any way less protective or less 06:48:12
7 stringent if it was managed by the State. 06:48:18

8 And lastly, there's a community involvement 06:48:20
9 requirement in both cases, in EPA's case and the State's case, 06:48:22
10 with the additional requirement for State Deferral of this 06:48:28
11 initial meeting with the public, and ascertaining whether 06:48:30
12 there's any opposition to the Deferral. 06:48:36

13 What will the State do to ensure that we have 06:48:40
14 community acceptance of Deferral? Well, we've already 06:48:44
15 established the information repository here at the library. 06:48:48
16 We've mailed out a fact sheet to over 1,200 residents and 06:48:52
17 community people within a quarter of a mile of the site. And 06:48:58
18 if you are not already on our mailing list, and you wish to 06:49:04
19 be, if you would please indicate on that attendance list that 06:49:06
20 we can make sure you are on there now. We put an ad in the 06:49:10
21 Wilmington Star announcing the meeting. Hopefully, some 06:49:14
22 people saw that. We're conducting the public meeting tonight, 06:49:18
23 of course, and tomorrow we are also having a public 06:49:24
24 availability session at the Nesbitt Court Apartments, which 06:49:30
25 are very near by the site. We understand there's a lot of 06:49:32

1 residents there who couldn't make it to the meeting tonight, 06:49:36
2 and we agreed to meet with them just to be there to answer 06:49:38
3 questions, and provide them with the handouts we have here 06:49:42
4 tonight in case they have any concerns. 06:49:46

5 And hopefully, what we're doing now is trying to 06:49:50
6 explain the differences between the State and EPA response 06:49:52
7 processes. We have established a 30-day public comment period 06:49:56
8 on the Deferral, which starts tonight, and also a 30-day 06:50:04
9 comment period on the Administrative Order and Consent, which 06:50:08
10 is available here at the repository for your review. We will 06:50:10
11 then respond to the comments that we receive, and provide 06:50:16
12 documentation to the EPA indicating whether or not we have 06:50:18
13 community acceptance of the Deferral. 06:50:24

14 What we'll continue to do is we'll maintain the 06:50:30
15 information repository throughout the entire process until the 06:50:34
16 site work is complete. We will continue to provide direct 06:50:38
17 information and assistance to the community as needed, and we 06:50:42
18 would like your input on that. If there is some other way 06:50:46
19 that we can communicate with people, and make sure people are 06:50:48
20 informed, or solicit information from the community, if you 06:50:52
21 have any suggestions, we would like to hear that. 06:50:56

22 We will continue to provide fact sheets, public 06:50:58
23 notice, public meetings, an opportunity for comment before the 06:51:02
24 draft, remedial action plan is finalized. Certainly before 06:51:06
25 the remedy is selected, we want to make sure that we've heard 06:51:12

1 everybody's concerns, everyone has chance to look at the 06:51:16
2 proposals, and give us some feedback on the proposed remedy. 06:51:20

3 Again, please let us know what you think, and if 06:51:24
4 there is some other way that we can better involve the 06:51:28
5 community, we would like to do that. Some of the differences 06:51:32
6 between the Deferral and the Federal Superfund process. They 06:51:38
7 are done through different authorities. One is done through 06:51:44
8 the State Inactive Hazardous Sites Response an act authority, 06:51:48
9 and the other one is done under the Superfund Law which is 06:51:50
10 CERCLA or Comprehensive Environmental Response Compensation 06:51:54
11 Liability Act, CERCLA as amended by SARA, Superfund Amendments 06:51:58
12 and Reauthorization Act of 1986. And just those are federal 06:52:02
13 statutes as opposed to state statutes. 06:52:08

14 Under the deferral situation, the State would be the 06:52:10
15 lead agency, the North Carolina Department of Environment 06:52:14
16 Natural Resources, and the U.S. EPA would still be involved in 06:52:18
17 the process. They'll be monitoring the state activities. 06:52:22
18 They'll be receiving copies of documents and providing 06:52:26
19 comments. We also will be providing them with quarterly 06:52:28
20 reports as to the progress at the site. 06:52:32

21 In the other case the federal Superfund process, EPA 06:52:36
22 leads and the state acts in the support role. Will the site 06:52:40
23 be listed on the NPL? Under the state option it will not be 06:52:44
24 listed on the NPA. Under the federal option it would be 06:52:48
25 listed on the NPL. However, -if at any time during the 06:52:52

1 deferral process the responsible party becomes uncooperative, 06:52:56
2 or if for some reason EPA is not satisfied with the way 06:53:00
3 they're managing the project, the EPA can terminate the 06:53:04
4 deferral, or the State can request the deferral be terminated. 06:53:10
5 In which case, the option still exists for EPA to proceed with 06:53:14
6 listing the site on the National Priorities List, and working 06:53:16
7 on cleaning up the site under the Federal Superfund process. 06:53:18
8 So that always remains as a fall back position if for some 06:53:22
9 reason the Deferral does not work out, or there's -- the 06:53:26
10 responsible parties become uncooperative. 06:53:34

11 The oversight. Under the State Deferral program a 06:53:38
12 state staff will directly oversee the work conducted at the 06:53:44
13 site. Under the Federal Superfund program that's usually done 06:53:46
14 by EPA and their contractors. This is a fairly significant 06:53:52
15 difference. Under the Federal Superfund program, if a site is 06:54:00
16 listed on the National Priorities List, there is something 06:54:04
17 known as a technical assistance grant which is available to 06:54:08
18 communities from EPA. Could be up to \$50,000, and this is 06:54:10
19 awarded to communities so that they can hire environmental 06:54:16
20 consultants to assist them in interpreting technical data 06:54:20
21 about the site. In the case of State Deferral this is not 06:54:24
22 available. We do not have any state funds appropriated to 06:54:28
23 give to the community for this purpose. 06:54:34

24 What we hope to do is by virtue of the fact that we 06:54:36
25 are much closer to Wilmington, we're in Raleigh, it's a little 06:54:40

1 closer than Atlanta, and we're going to be at the site quite a 06:54:44
2 bit, we would like to make ourselves as available as possible 06:54:50
3 to meet with the community, and to sit down, and go over the 06:54:52
4 technical data, basically volunteer our services as much as 06:54:56
5 possible, but unfortunately we can't fund hiring a technical 06:55:00
6 consultant. There are other programs available. We have some 06:55:06
7 information about other programs like the TOSS program that is 06:55:12
8 also available through EPA that may be an avenue for 06:55:14
9 supporting this type of activity. 06:55:18

10 ~ Time frame to begin clean up, again, we estimate 31 06:55:24
11 months to start under the deferral option and 47 months to 06:55:30
12 start under the EPA option. And this just summarizes what I 06:55:32
13 just went through, comparing the programs, and showing the 06:55:40
14 differences between the two programs. 06:55:44

15 What we see as the benefits of State Deferral. 06:55:48
16 Well, I think the first one is that we can -- the clean up of 06:55:52
17 the site could be initiated more quickly. The quicker we can 06:55:56
18 get to cleaning up the site, addressing any of the problems at 06:56:00
19 the site, to work quickly, the contaminants at the site could 06:56:06
20 be contained if there's any migration, and the more quickly 06:56:10
21 the site can be redeveloped and put back into productive 06:56:14
22 reuse. 06:56:18

23 Second, as I mentioned, the State staff is closer to 06:56:18
24 the site, so we can be out at the site more often than EPA 06:56:22
25 can. If they were working on site just by virtue of the fact 06:56:26

1 that we're located a lot closer to the site, we can be more 06:56:30
2 responsive. If we get a call from a citizen saying something 06:56:34
3 is going on out there, you guys need to come out and check it 06:56:38
4 out, and we can get out there pretty quickly, and we can be 06:56:42
5 more available to the public just to meet with them, and 06:56:44
6 answer questions, and you can phone us up, and we're pretty 06:56:48
7 close by. 06:56:50

8 And lastly, we reduce oversight cost because we're 06:56:52
9 using state staff. It's -- we're eliminating the middle man. 06:56:56
10 In the EPA's case they often use their own staff, plus 06:57:04
11 oversight contractors, which because they are so far from the 06:57:08
12 site, they need to have additional eyes and ears at the site. 06:57:12
13 In our case we are located more closely. We don't have to 06:57:16
14 hire contractors, and we can eliminate that additional 06:57:20
15 oversight cost. 06:57:22

16 Just wanted to close by saying that if you have any 06:57:28
17 comments that you would like to submit on the proposed 06:57:32
18 referral or on the AOC, you can raise those issues verbally 06:57:36
19 tonight, or you can provide us with written comments. We've 06:57:40
20 got a box for comments in the back. There's a sheet on the 06:57:44
21 back of the handouts, if you want to jot something down. 06:57:48

22 And also you can send written comments to Stuart. 06:57:50
23 His address is up here in the handout, you can fax them to 06:57:54
24 him, and also send them by e-mail. 06:58:00

25 And lastly if you have some other questions that are 06:58:02

1 not specifically a comment on the Deferral or the AOC, ask 06:58:07
2 Stuart. He's the State Project Manager for the site. This is 06:58:14
3 his phone number, and just to be fair, I didn't want to put 06:58:14
4 just his number and not mine. But as an alternate, if he's
5 not available, you can give me a call as well, and I'll make 06:58:24
6 sure that your questions get answered. So with that, I'll end 06:58:24
7 the presentations, and open the floor for questions. Thank 06:58:30
8 you all for being so patient. Any questions? 06:58:34

9 UNIDENTIFIED SPEAKER: What about that employees 06:58:52
10 that were working at the site? Has anything been down to look 06:58:52
11 at that situation, whether or not they were impacted. 06:59:00

12 MS. DEROSA: Nothing has been done so far. If -- I 06:59:04
13 guess, if there is some information on employees and things 06:59:08
14 like that, you think maybe some concern to past employees, I 06:59:12
15 mean, we can pass, like we have a Division of Occupational 06:59:18
16 (inaudible) with the State, and if there's some concern about 06:59:26
17 some disease cluster or something that we might have some 06:59:30
18 information on, we can pass that information on to them, and 06:59:34
19 see if they can take a look at it. 06:59:38

20 Again, what we're trying to assess here is not so 06:59:44
21 much occupational exposure. That's people who are exposed as 06:59:50
22 part of their jobs are out of the realm of Superfund, but we 06:59:56
23 could refer you to some people in the State, if you are 07:00:02
24 interested in that. 07:00:04

25 UNIDENTIFIED SPEAKER: It seems that over the years, 07:00:12

1 according to the fact sheet, more -- it's discovered more and 07:00:14
2 more toxins. They started out they didn't really find 07:00:16
3 anything, and then over the years they found more and more. 07:00:20
4 Is that because of the technology became -- 07:00:22

5 MS. DEROSA: Well, Stuart might be able to answer 07:00:28
6 that better. 07:00:30

7 MR. PARKER: Yeah. I think that's more of the 07:00:32
8 result of the location of samplings that took place. 07:00:34
9 Initially, there wasn't very detailed groundwater information. 07:00:38
10 Now the site has had several dozen monitoring wells installed 07:00:42
11 in it, and so we know about more about the groundwater 07:00:46
12 contamination. As far as the soil contamination, a similar 07:00:48
13 situation. The contractors that have worked in the past on 07:00:52
14 the site may initially have taken only a dozen or so samples, 07:00:58
15 and on subsequent passes have taken several dozen samples. We 07:01:00
16 have a pretty good idea now we have pretty good sampling 07:01:04
17 coverage on site. We just need to -- we may 07:01:08
18 need to sample some additional compounds, but I don't think 07:01:12
19 that this -- we don't really see any indication of a spread 07:01:16
20 over time of contamination. It's more an artifact of places 07:01:20
21 we've gone to look for contamination. 07:01:24

22 For example, the sampling of sediments in Greenfield 07:01:26
23 Creek is a relatively recent occurrence. It wasn't initially 07:01:30
24 addressed back during the early 90's. At that time a lot of 07:01:34
25 the sampling centered around whether the landfarming operation 07:01:38

1 on the site was having an effect on the contamination of soils 07:01:42
2 there. I hope that answers the question. 07:01:46

3 UNIDENTIFIED SPEAKER: So, it's not going to get 07:01:48
4 worse. It's just going to stay like it is until the 31 months 07:01:50
5 pass, and you begin to get rid of it? 07:01:54

6 MR. PARKER: Well, there's certainly the potential 07:01:58
7 for the contamination to spread, but as far as the imminent 07:01:58
8 hazard of that occurring, we don't think there's any hazard. 07:02:04
9 As I said, if we started digging up large amounts of soil at 07:02:08
10 the site, that might allow some contaminants to volatilize, 07:02:12
11 and exposure to workers. 07:02:14

12 If we knew that there was lot of fishing going on 07:02:18
13 on the Greenfield Creek, we'd certainly want future sampling 07:02:24
14 to determine whether there actually is contamination, or 07:02:28
15 whether the fish are actually being affected by that, and 07:02:30
16 whether that presents a hazard. The same would be true in the 07:02:32
17 Cape Fear River. We want to propose additional sampling in 07:02:36
18 the Cape Fear River bed to determine if there actually has 07:02:40
19 been contamination, but it would be pretty much the same
20 situation if we did that with the State or EPA. There would 07:02:42
21 still be, I wouldn't say delay, but there would be an interval 07:02:46
22 time during the regulatory process before additional sampling 07:02:52
23 occurred. 07:03:00

24 UNIDENTIFIED SPEAKER: One more question. 07:03:04

25 MR. FLORES: Yeah.- I think that probably the reason 07:03:06

1 what appears that more contamination has been discovered as 07:03:08
2 the years pass has to do with the scope of the investigations. 07:03:12
3 Like in the early years when we first go over there after the 07:03:18
4 site is discovered, only a few samples are collected, and this 07:03:22
5 is a big area. So, it's enough that we find one that one 07:03:26
6 sample that is contaminated, so that we decide to move to the 07:03:32
7 next step. And then on the next step, the scope of the 07:03:36
8 investigation actually increases so more samples are 07:03:38
9 collected. And I guess in this site the third step was 07:03:42
10 basically the expanded site inspection. And on that one, a 07:03:46
11 lot more samples were collected, so areas that were not 07:03:52
12 covered originally were sampled. 07:03:56

13 And then now either if it goes to the State or to 07:03:58
14 EPA, the remedial investigation in Box No. 3 will -- similar 07:04:02
15 to what the State will do, they will cover whatever gaps are 07:04:10
16 not covered in the previous investigation, but I guess that it 07:04:16
17 probably will be safe to say that the contamination has been 07:04:20
18 there all of the time. It's just that we -- the first thing 07:04:24
19 we do is try to identify that is there, and then determine the 07:04:28
20 extent, but I don't think it's really increasing. There's 07:04:32
21 no -- 07:04:36

22 MR. PARKER: This isn't a site that would be 07:04:38
23 characterized as an emergency in nature. If it was, then an 07:04:40
24 earlier action, removal type action, or emergency action by 07:04:42
25 the EPA would take place. An example of a site like that 07:04:46

1 would be if we had -- if we knew that a community well was 07:04:52
2 contaminated with creosote as a result of the site, or if we 07:04:52
3 had a documented instance of fish kill, or something of an 07:04:54
4 unknown origin occurring here at the site, that sort of thing. 07:05:00

5 UNIDENTIFIED PERSON: One more question. According 07:05:10
6 to the fact sheet, once again, if there'S the State Deferral 07:05:10
7 the Southern Wood Piedmont Company has signed a draft asking, 07:05:14
8 binding them to a schedule for investigation and clean up of 07:05:18
9 their Wilmington site. So the company that caused all this 07:05:22
10 would be the one that would be overseeing the removal? 07:05:26

11 MR. PARKER: The State would be overseeing the 07:05:32
12 activities. We would have to review all of their proposed 07:05:32
13 activities. We would have to make sure that they met the EPA 07:05:36
14 and State requirements. Does that answer the question? 07:05:38

15 The operators -- the people operating the site 07:05:46
16 actually doing the process, that's the responsible party in 07:05:46
17 this case identified as Southern Wood Piedmont, but they would 07:05:50
18 -- it wouldn't be a matter of the fox guarding the hen house, 07:05:54
19 if that's what you're talking about. We're in a neutral 07:05:56
20 position. Our state agency is a neutral position where we 07:06:00
21 would be overseeing and approving the activities that occur. 07:06:04

22 UNIDENTIFIED PERSON: But that they would be the 07:06:10
23 company that would be -- they wouldn't just be responsible 07:06:10
24 financially. They would be the ones overseeing the removal of 07:06:14
25 the contaminates.

1 MS. DEROSA: They would be doing the sampling. 07:06:18
2 Actually their consultants who would be doing the sampling, 07:06:20
3 and hiring people to do whatever clean-up activities are done. 07:06:24
4 Our role is to oversee it. 07:06:28
5 MR. PARKER: Regulatory. 07:06:32
6 MS. DEROSA: In other words, every step of the 07:06:34
7 process has to be approved before they can continue onto the 07:06:36
8 next step. 07:06:38
9 MR. FLORES: And that is similar to the federal 07:06:40
10 process. We first give what we call the PRP to the 07:06:44
11 responsible party the opportunity to do the work with EPA and 07:06:50
12 the State overseeing what they are doing. If we cannot work 07:06:56
13 something out with them, then EPA will do it. In this case 07:07:00
14 just like we would do, the State has given the opportunity to 07:07:06
15 the PRP's to do the work, and they have agreed by signing this 07:07:12
16 AOC, so they will do it. They will pay for the cost, and then 07:07:18
17 the State and EPA's role will be overseeing what they are 07:07:24
18 doing, and reviewing all of the documents and everything. So 07:07:30
19 in that aspect, it's similar to what we will do as in the 07:07:34
20 federal process or what the Deferral will do. The difference 07:07:40
21 is that the State in this case is the one having the lead, and 07:07:44
22 the EPA is in a supportive role. 07:07:50
23 UNIDENTIFIED PERSON: I just want to comment that 07:07:52
24 that may always have been the way it's done, but it just 07:07:54
25 doesn't seem like a real good idea to me. 07:07:56

1 MS. DEROSA: I think the idea -- well, it's two 07:08:00
2 things. The first thing is, I think, the EPA and the Congress 07:08:00
3 wanted to see the people who are responsible for doing the 07:08:10
4 contamination actually pay for doing the clean up, and so in 07:08:10
5 other words to give them that opportunity to do that. And 07:08:24
6 that's usually the first shot. Otherwise -- 07:08:2

7 UNIDENTIFIED PERSON: I think they should be 07:08:30
8 responsible financially. I just don't know if they should be 07:08:30
9 the ones overseeing the -- 07:08:34

10 MR. PARKER: You mean, actually performing the work? 07:08:36

11 MR. FLORES: It's like we will be overseeing. Like, 07:08:40
12 for example, they have to submit a plan with their locations 07:08:42
13 where they're going to be collecting the samples, for example, 07:08:44
14 and we have to approve that. So it's not that they can 07:08:48
15 collect samples whenever they feel that there's nothing there. 07:08:52
16 So, we have to approve that, and then while they're collecting 07:08:56
17 the samples, either the State or EPA will be there, and 07:08:58
18 looking at the handling of the samples is done properly, and 07:09:04
19 then it will go to a lab that is supposed to be fine. But in 07:09:10
20 general seems like -- I see what you're saying, but -- 07:09:14

21 MR. PARKER: You're saying that you feel there's a 07:09:20
22 conflict of interest in allowing -- 07:09:20

23 UNIDENTIFIED PERSON: Yes, that's what I'm saying. 07:09:24

24 MR. PARKER: Allowing a contractor for the 07:09:26
25 responsible party to do the actual sampling, that's your 07:09:28

1 concern. Is that what you're saying? 07:09:32

2 UNIDENTIFIED PERSON: Yes. It seems like a conflict 07:09:34
3 of interest. 07:09:38

4 MS. DEROSA: Alternatively what happens is that if 07:09:40
5 you can't get -- the responsible parties doesn't do the work, 07:09:42
6 and a government agency has to pay for it, in the case of 07:09:46
7 State, we probably, you know, wouldn't be able to do that, but 07:09:48
8 if it was an NPL site, the EPA used Superfund to do it spends 07:09:52
9 their money, then they have to go to court, and recover their 07:09:58
10 cost, and it takes years to get that money back. 07:10:02

11 And so, it's -- and plus then they can try -- they 07:10:04
12 can -- they have to sue for their damages. They can try to 07:10:10
13 collect damages from the responsible party. 07:10:14

14 MR. PARKER: But litigation cost are a major 07:10:18
15 contributor to cost. 07:10:22

16 MS. DEROSA: So to avoid that and to avoid using the 07:10:24
17 Government's money to begin with, this was the way Congress 07:10:24
18 set up the federal process. 07:10:28

19 MR. PARKER: If you're concerned about potential 07:10:32
20 problems with the authenticity of the sampling, we've 07:10:32
21 established through multiple means that there is contamination 07:10:36
22 of the site. And obviously if it suddenly disappeared over 07:10:40
23 night we would be very suspicious. And we, of course, have 07:10:44
24 the option of taking split samples from the contractors, and 07:10:48
25 sending them to our state laboratory to determine whether 07:10:52

1 there is a discrepancy in the information they're giving us. 07:10:54
2 So it's not likely that anyone is going to be able to fake 07:10:58
3 information. Any contractor that did that would be 07:11:02
4 potentially slitting their own throat by doing so. 07:11:08

5 UNIDENTIFIED PERSON: I'm not saying it would
6 happen. I'm just curious. 07:11:14

7 MR. PARKER: So we have all sorts of options,
8 though, as to how we confirm what's going on at the site as 07:11:18
9 the regulatory agency. 07:11:22
07:11:24

10 UNIDENTIFIED PERSON: Is it possible it would take 07:11:30
11 less than 31 months to get started? 07:11:32

12 MS. DEROSA: It's possible. We would like it to. 07:11:34

13 UNIDENTIFIED PERSON: It seems like an awfully long 07:11:38
14 time to since the investigation is already done. 07:11:40

15 MS. DEROSA: Yeah. It may take less time than that. 07:11:44
16 Depends on how quickly reports get prepared and reviewed, and 07:11:48
17 if there are any changes that need to be done, how quickly we 07:11:52
18 can negotiate that, and get agreements on that. So, 07:11:56
19 hopefully, there is a possibility we could get started before 07:11:58
20 31 months. Of course, we would prefer that. 07:12:04

21 UNIDENTIFIED PERSON: Along the same lines. And 07:12:08
22 Luis has all of the studies for the EPA in his review period, 07:12:10
23 but will EPA have to give their blessing to each stage, or 07:12:14
24 would you have that authority to keep the project moving 07:12:20
25 forward, or will that have to be your approval, to EPA their 07:12:28

1 approval, back to you to keep the project moving? 07:12:32

2 MS. DEROSA: We will be the lead agency, and we will 07:12:36
3 have the final approval on handling the project. However, we 07:12:40
4 would like EPA to concur with what we're doing, and so we want 07:12:46
5 to take -- get their comments as well in what we're doing, how 07:12:52
6 we're doing. The -- you know, what EPA's, and correct me if 07:12:56
7 I'm wrong, Luis. I don't want to speak for you. 07:13:02

8 MR. FLORES: Go ahead. 07:13:06

9 MS. DEROSA: But I guess, you know, there's kind of 07:13:06
10 two big areas that EPA is going to be concerned with in 07:13:10
11 looking at the Deferral. One is, are we going -- are we going 07:13:14
12 to achieve the same level of clean up as would be achieved 07:13:18
13 under the federal program. That's an absolute requirement 07:13:22
14 under the Deferral process. So whatever we do, it has to meet 07:13:26
15 what they would do as far as addressing any kind of clean up 07:13:32
16 standards and things like that. So that is one major area. 07:13:38
17 The second major area concerned about is community 07:13:40
18 support, what we're doing. 07:13:46

19 UNIDENTIFIED PERSON: 31 months is a long time. 07:13:56

20 MS. DEROSA: Well, we're saying it could be shorter. 07:13:58
21 I mean, we'd like it to be shorter. I just want to make sure 07:14:02
22 we factored in that worse case scenario. If everything comes 07:14:06
23 in at exactly the due date. If it comes in earlier, then we 07:14:12
24 can get started earlier and get along faster. 07:14:14

25 MR. PARKER: Things really held to are the 07:14:22

1 requirements such as this meeting, Two weeks for the public to 07:14:22
2 be notified of what is going on. But, if we have a report to 07:14:26
3 our satisfaction in a shorter period of time, 30 days or 60 07:14:32
4 days, then we can go ahead. There's no rules preventing us 07:14:36
5 from doing so. 07:14:40

6 MR. FLORES: Would not be only to EPA. It also 07:14:42
7 would depend how good the reports are that the company has 07:14:44
8 prepared. So if the initial report is not good, we're going 07:14:46
9 to have a lot of problems, it's going to take longer. 07:14:50

10 MS. DEROSA: Anybody else have any questions? 07:15:02

11 UNIDENTIFIED PERSON: I just happened to come a 07:15:04
12 little late. 07:15:06

13 STENOGRAPHER: I'm sorry, I can't hear you.

14 UNIDENTIFIED PERSON: I was really concerned about
15 -- (inaudible.)

16 MR. PARKER: What kind of technology we use? It's 07:16:02
17 hard to speculate at this point. There are a lot of potential 07:16:02
18 uses of technology which EPA encourages us to use. One that's 07:16:06
19 been discussed is biological remediation -- (inaudible.) 07:16:12

20 MS. DEROSA: After we get the extent of the 07:17:36
21 contamination defined, more contamination, we're pretty much 07:17:40
22 we know all of the contaminants at the site, because if you 07:17:42
23 have contamination of the soil, you might have to treat that 07:17:44
24 differently then contamination of the sediment. And if it has 07:17:48
25 to be some (inaudible) ground water then might have to pump 07:17:52

1 ground water whatever. So it just depends on once we're sure 07:17:56
2 the extent of the contamination, the contaminates we're 07:18:00
3 dealing with, then we would have all of the options. It's a 07:18:04
4 little early for that now, but Stuart has some of the ones 07:18:08
5 that would be most likely be considered for degrading these 07:18:12
6 wood treatment compounds. 07:18:16

7 MR. PARKER: Any other questions, comments? 07:18:26

8 UNIDENTIFIED PERSON: That landfarming operation, 07:18:32
9 did that accomplish anything? 07:18:34

10 MR. PARKER: It partially broke down some of the 07:18:36
11 compounds. (Inaudible) The compounds as described as being 07:18:42
12 part of the creosote, those are chemical substances that are 07:18:44
13 composed of carbon rings various combinations. And some of 07:18:48
14 the molecules are larger and more complex than others, and 07:18:52
15 more difficult to break down. Some monitoring was done by a 07:18:56
16 contractor in the early 1990's, which demonstrated that some 07:19:00
17 of the compounds had degraded considerably, and other 07:19:04
18 compounds were more recalcitrant and more difficult to break 07:19:08
19 down. 07:19:12

20 That type of landfarming is not really approved by 07:19:12
21 the State as a remedial method. It's fairly passive. What we 07:19:16
22 try to do now when we treat the soils is to introduce 07:19:22
23 nutrients and oxygen in a more controlled setting to maximize 07:19:28
24 the potential for the organisms to do the work. 07:19:34

25 MS. DEROSA: Any more questions? If we don't have 07:19:46

1 any questions, I would like to thank everybody for coming out. 07:20:02
 2 And if you think of anything afterwards, and you want to call 07:20:0
 3 Stuart, myself, our phone numbers are in the handouts. If you 07:20:10
 4 would like to submit your comments on your way out, we have 07:20:14
 5 got a box for comments out there. 07:20:18

6 And please remember that the information repository 07:20:20
 7 is located here at the library. It will be updated as we get 07:20:28
 8 new documents in and keep up with things. And if you think of 07:20:32
 9 anything else that we can do to keep you all informed, or 07:20:34
 10 you've got information that you would like to share with us 07:20:38
 11 about the site, please don't hesitate to contact us. 07:20:40

12 UNIDENTIFIED PERSON: Do you want us to vote on 07:20:46
 13 whether we want the State to do it? 07:20:48

14 MS. DEROSA: Well, it's not a vote so much. I guess 07:20:50
 15 if there are any objections you think that the Deferral is not 07:20:52
 16 a good idea, that's what your trying to ascertain. 07:20:56

17 MR. PARKER: Or concerns about any potential 07:21:00
 18 consequences of taking this course as outlined. 07:21:02

19 UNIDENTIFIED PERSON: I think it's the thing to do 07:21:08
 20 myself, the Deferral. 07:21:10

21 MS. DEROSA: Well, as I said we're not voting. 07:21:18
 22 We're just looking at just trying to raise issues, and if 07:21:20
 23 anybody has any objections here. Thank you very much. 07:21:22

24
 25

1 STATE OF NORTH CAROLINA

2 COUNTY OF NEW HANOVER

3

4

C E R T I F I C A T E

5

6

7

8

9

I, Tracy F. Schell, a Notary Public in and for the State of North Carolina, do hereby certify that the preceding public meeting was taken stenographically by me on the 18 day of March, 1999, and subsequently transcribed to the best of my ability to hear and transcribe what was being said.

10

11

I have hereto set my hand and affixed my official notarial seal, this the 30th day of March, 1999.

12

13



14

TRACY F. SCHELL, NOTARY PUBLIC
My Commission Expires 8/17/99

15

16

17

18

19

20

21

22

23

24

25

Kickoff Public Meeting

SOUTHERN WOOD PIEDMONT CO

Wilmington, New Hanover County, NC

March 18, 1999

NC Department of Environment and Natural
Resources (DENR)

US Environmental Protection Agency (EPA)

Purpose of the meeting

- Discuss environmental concerns at the
Southern Wood Piedmont - Wilmington Site
- Obtain feedback from the community on the
proposed State deferral of this site

Speakers

Pat DeRosa, Head
Site Evaluation and Removal Branch
Superfund Section
Division of Waste Management
NC Dept. of Environment and Natural Resources
(DENR)

Stuart F. Parker, Hydrogeologist
Superfund Section
Division of Waste Management
NC Dept. of Environment and Natural Resources
(DENR)

Luis Flores, Remedial Project Manager
NC Site Management Section
Waste Management Division
US Environmental Protection Agency
(EPA) Region IV

Agenda

- 6:00 Welcome and introductions
 Purpose of meeting.....*Pat DeRosa, NCDENR*
- 6:10 Site Information.....*Stuart F. Parker, NCDENR*
- 6:30 Possible routes to site cleanup
 National Priorities List (NPL).....*Luis Flores, USEPA*
 State Deferral.....*Pat DeRosa, NCDENR*
- 6:50 Questions and Comments
- 8:45 Close Meeting.....*Pat DeRosa, NCDENR*

Information Repository

New Hanover County Public Library
Reference Desk
210 Chestnut Street
Wilmington, NC 28101
Telephone: (910) 341-4390

Hours:	M-Th	9 am - 8:45 pm
	Fri	9 am - 5:45 pm
	Sat	9 am - 4:45 pm
	Sun	1 pm - 4:45 pm

**Proposed State Deferral:
Southern Wood Piedmont Co.
Wilmington, NC**

**"Kickoff" Public Meeting
New Hanover County Public
Library
March 18, 1999**

Background Information

**Stuart F. Parker
Project Manager
N.C. Superfund Section**

Presentation Topics:

- Hazardous substances at the site.
- Potential human health and environmental concerns.

Site Description:

- Located on Greenfield Street, between Front Street and Cape Fear River.
- 93 acres owned by State Ports Authority (SPA). 3 acres privately owned (southeast corner of site).
- SPA recently purchased Northern portion of site from City of Wilmington.

FIGURE 1:
SOUTHERN WOOD PIEDMONT CO.
WILMINGTON, NC
NCD 058 517 467
SITE LOCATION PLAN

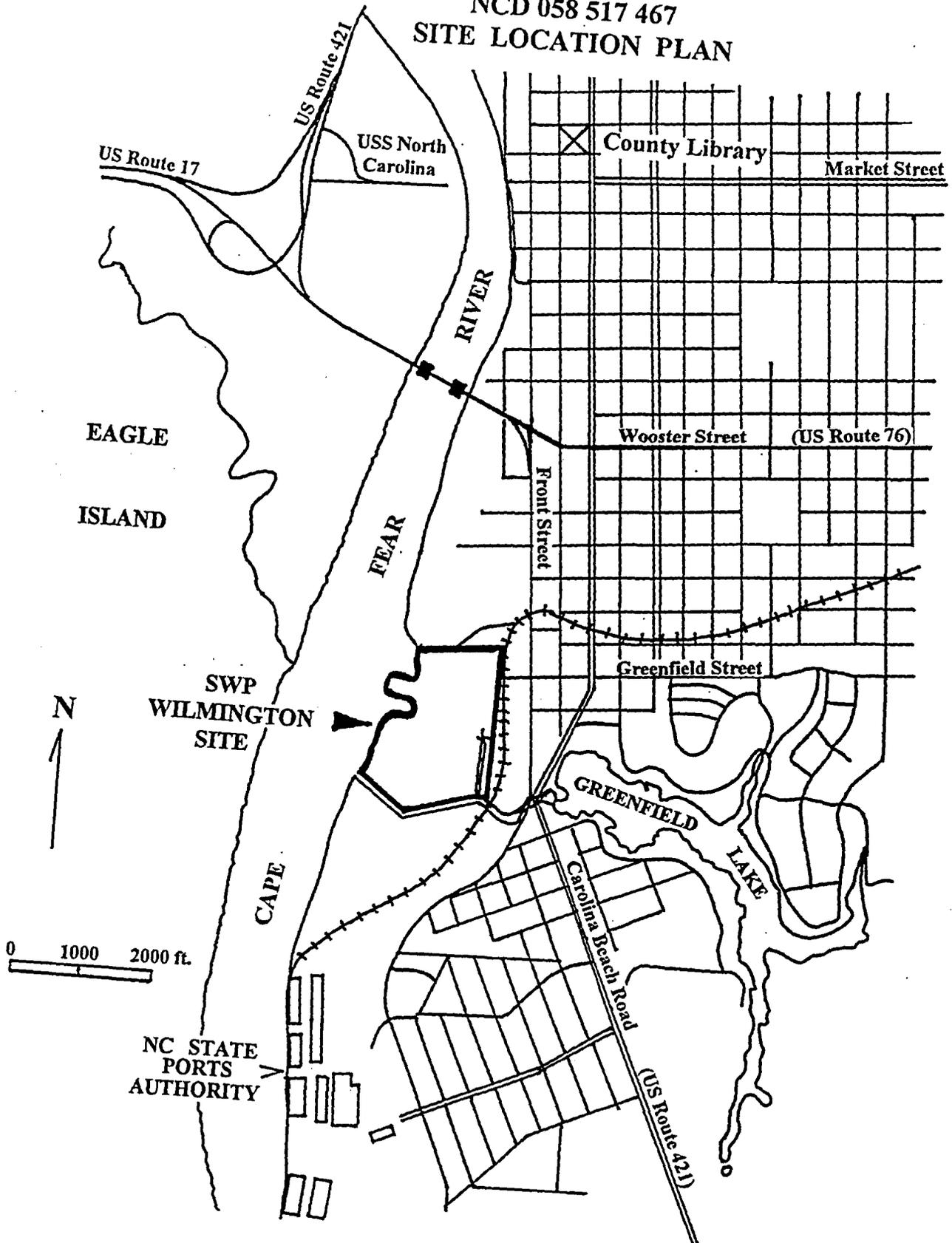
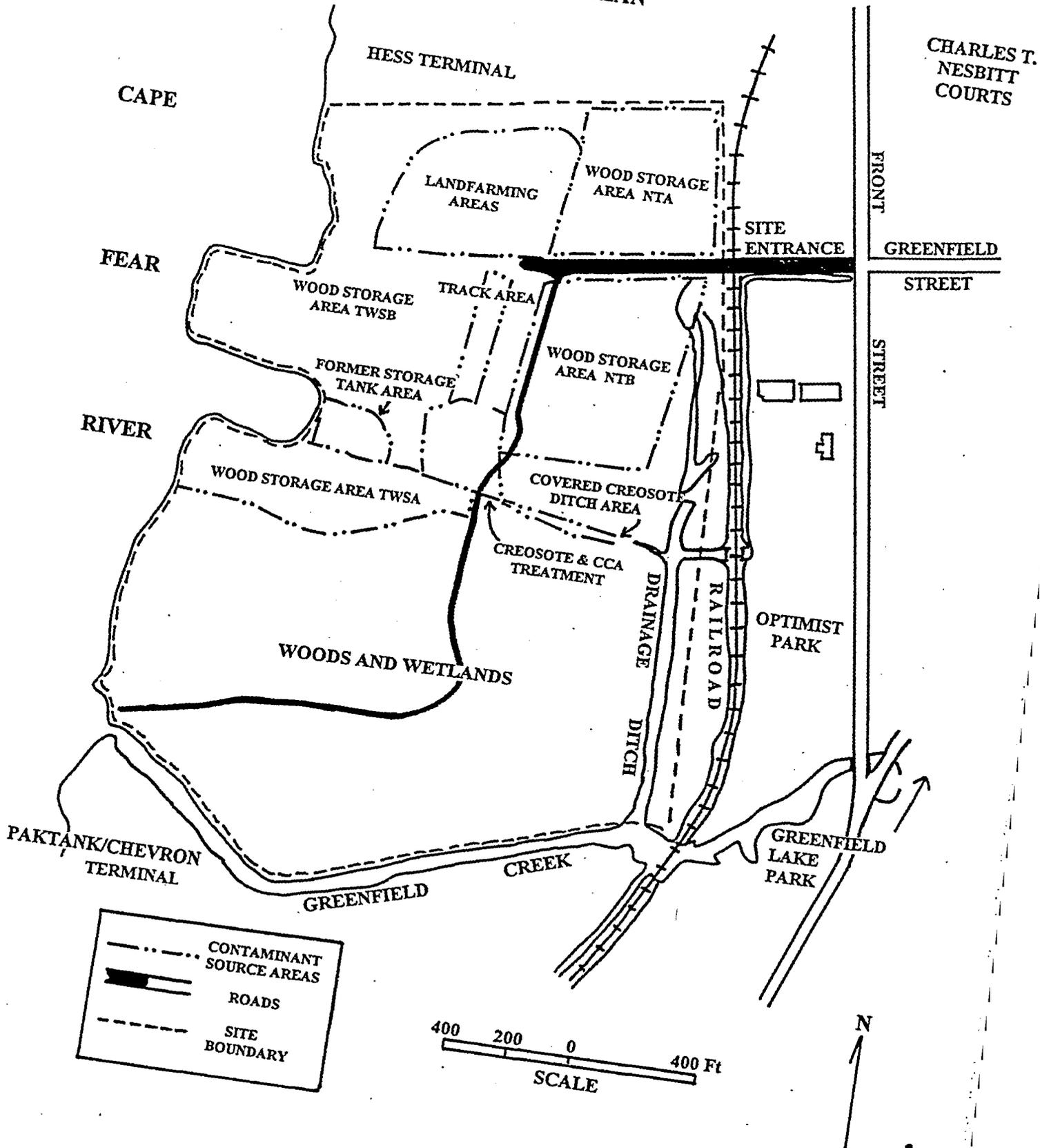


FIGURE 2:
 SOUTHERN WOOD PIEDMONT CO.
 WILMINGTON, NC
 NCD 058 517 467
 SITE PLAN



Site History (1932-1969)

- Pre-1932 - Site used to construct concrete barges.
- 1932-1935 - Site first leased for wood treating by North State Treating Company.
- 1935-1969 - Taylor Colquitt leased northern portion of the site from City of Wilmington for wood treating.

Site History (1969- Present)

- 1969 - 1971 - ITT operated the site as a wood treating facility.
- 1971 - Southern Wood Piedmont Company formed under ITT.
- 1983 - Facility Closed.

Future Site Use:

- The State Ports Authority plans to develop the site to expand its storage facilities.

Facility Operations

- 1932-1983 - Creosote wood treatment.
- 1972-1983 - Chromated Copper Arsenate (CCA) wood treatment.
- 1980-1983 - Pentachlorophenol (PCP) wood treatment.

Dioxins:

- Trace contaminant in PCP (Also a high-temperature by-product).
- Human health effects under investigation; Considered highly toxic.
- Not volatile. Binds to soil/sediment.
- Several species; 2,3,7,8-tetrachlorodibenzo-dioxin (TCDD) most important.

Potential Effects of Site Contaminants

- Can cause chronic human health effects, given long-term exposure at sufficient concentration.
- Can be ecologically toxic to wetland communities.
- Can accumulate in the aquatic food chain, affecting fisheries.

Residual Soil Contamination Identified (to date):

- Wood treating areas: Creosote, arsenic.
- Covered ditch area: Creosote.
- Wood storage areas: Creosote, arsenic, some dioxins.
- Landfarming areas: Creosote, dioxins.

Surface Water Pathway:

- The primary human health and environmental concern at this site.
 - Fishing.
 - Wetlands.
- Two drainage pathways from site:
 - On-site drainage ditch to Greenfield Creek.
 - Runoff to, or flooding by, Cape Fear River.

Surface Water Pathway Contamination:

- Sediments in drainage ditch and Greenfield Creek contain creosote compounds.
- Possible creosote contamination in river sediment at site water-front, and at mouth of Greenfield Creek.
- Greenfield Lake is not affected by site.

Surface Water Concerns:

- Possible buildup of contaminants in fish/other animals in Greenfield Creek.
- Greenfield Creek has been used for fishing and crabbing.
- Wetlands along drainage ditch and Greenfield Creek could be affected.
- Fish, wetlands and rare species along Cape Fear River are potentially threatened by contamination.

Groundwater Pathway:

- Pathway of secondary concern.
 - No impact on drinking water.
 - Possible migration from groundwater to surface water
- Two water-bearing sand layers lie beneath the site, underlain by bedrock aquifer.
- Groundwater in the sand aquifers is affected by Cape Fear River tides.
- Groundwater east of the site is expected to flow westward, toward the site.

Groundwater Contamination:

- Creosote has accumulated at base of upper sand aquifer, 10-15 ft. beneath production and covered-ditch areas.
- Creosote also present in upper aquifer beneath storage tank areas near waterfront.
- Groundwater in both sand aquifers contains dissolved creosote.

Groundwater Effects:

- No drinking-water wells near the site, except for spring at Greenfield Lake (upgradient of the site).
- Wilmington's municipal water comes from the Cape Fear River, several miles upstream of the site.
- Slight potential for seepage of groundwater contaminants to drainage ditch, Greenfield Creek or Cape Fear River.

Soil Exposure Hazards:

- Soil contamination on site exceeds limits set by EPA for industrial or residential human exposure, and also exceeds State remediation goals for soil.
- Exposure to contaminated soil or sediment can occur only at the site property and along the bottom of the drainage ditch or lower Greenfield Creek.

Soil /Air Exposure Hazards:

- Contaminant concentrations in on-site soils are generally in parts per million.
- Dioxin and arsenic residues on site are not volatile, and do not present an air-pollution hazard.
- Creosote in undisturbed soil at site is not concentrated enough to produce measurable air pollution.

Soil /Air Exposure Hazards:

- The site is vegetated, preventing wind-blown dust.
- Future construction/excavation could potentially expose on-site workers to site contaminants, requiring safety monitoring.

Summary:

- Contaminants present at the site are wood-treating chemicals and their by-products, including creosote, arsenic and dioxins.
- These hazardous substances have been found in soil and groundwater at the site, and in drainage pathways leading from the site.
- Presently, people located off the site are not at risk of exposure to site contaminants by way of groundwater, soil or air.

Summary (cont.)

- People working or trespassing on the site could be exposed to site contaminants by contacting or swallowing soil. This hazard could increase during future site construction.
- Contamination in Greenfield Creek sediments may create a potential health hazard to people who **regularly** consume fish or other animals from the lower creek.
- Greenfield Lake is not affected by the site.

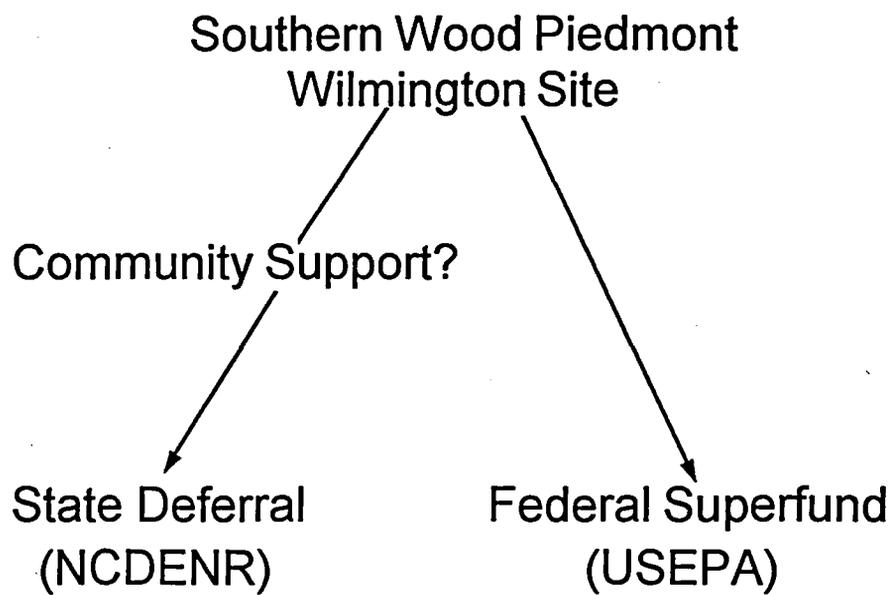
CONCLUSIONS:

- It is necessary to address contamination at the Southern Wood Piedmont Wilmington site, and to take appropriate action to protect public health and the environment.
- The state of North Carolina has an active interest both in addressing the site's potential chemical hazards and in returning the site to economically productive use.

How Can You Help?

If you have additional information about past site activities, groundwater use, or current fishing practices near the site, please contact:

Stuart F. Parker
NC Superfund Section
(919) 733-2801, ext. 277



Possible routes to site cleanup

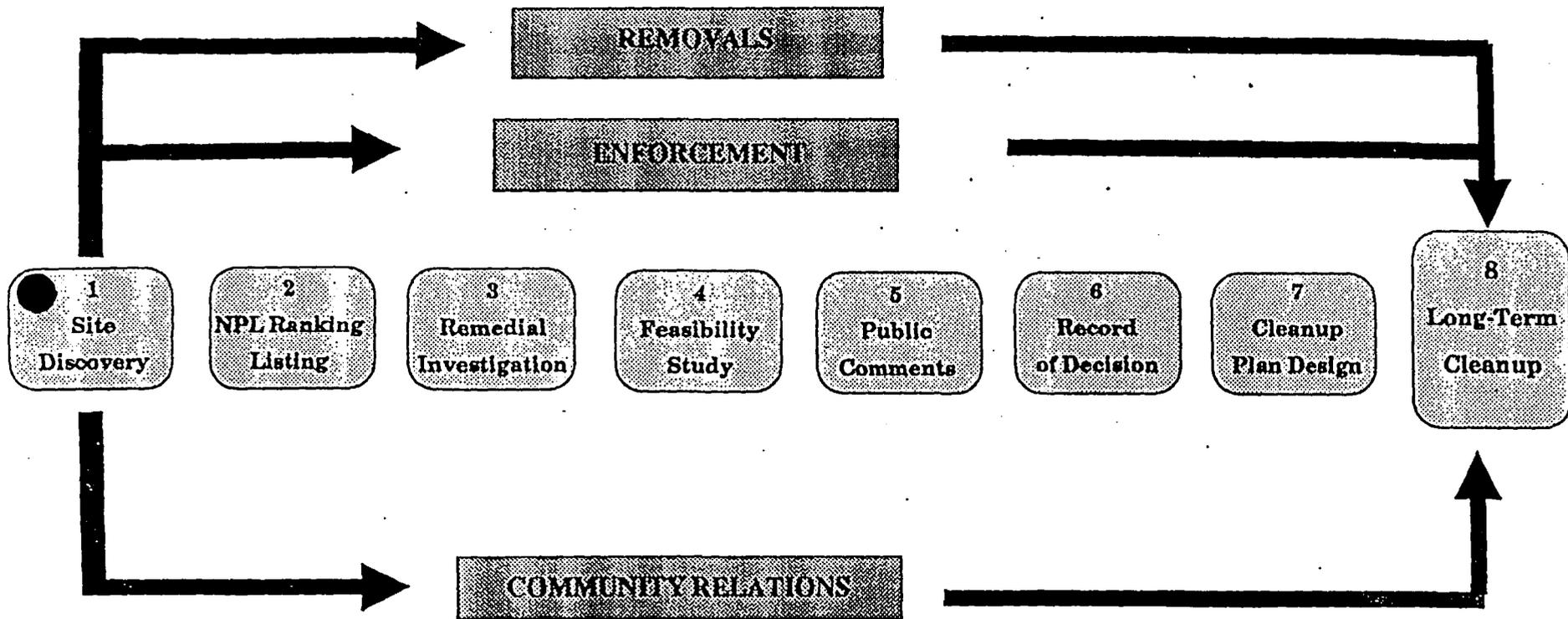
National Priorities List (EPA lead)

State Deferral (State lead)

Does the community support the deferral?

- Explain the Federal Superfund Process
 - National Priorities List (NPL)
 - Explain the State Deferral Process
 - Compare and discuss benefits of deferral
 - Address questions and comments
-

SUPERFUND PROCESS



Prepare & Maintain a Community Relations Plan

● Establish & Maintain an Information Repository

Establish Information Contacts

Conduct Informal Meetings

Inform Local Officials

Assist with Technical Assistance Grants (TAGs)

Issue Fact Sheets

Issue News Releases

Hold Public Meetings

Provide for Public Comments

Prepare Responsiveness Summary

What is State Deferral?

EPA may defer listing a site on the NPL while the State oversees remedial investigation and cleanup conducted by the parties responsible for the contamination.

State Deferral

- | | |
|----------|--|
| May 1995 | EPA published deferral program guidance |
| Feb 1997 | EPA and State agree on State capabilities and process for deferral |

Memorandum of Agreement (MOA)

Deferral Process

Administrative Order on Consent (AOC)

- Legal document (agreement)
- Between State and responsible parties (Southern Wood Piedmont Co.)
- Agree to conduct and pay for investigation and cleanup of site as needed
- Review & comment until April 17, 1999

Deferral Process (cont.)

Remedial Investigation (RI)

- Work conducted to date by responsible parties
- Report findings to State/EPA for review (30 days)
(RI report describes the extent of contamination at and around the site)
- State identifies additional work to be done

Deferral Process (cont.)

Supplemental Remedial Investigation (SRI) Workplan

- Prepared by responsible parties
- Spells out additional work to be performed
 - example: sampling plan
 - well surveys
 - identification of wetlands
- Submitted for State/EPA review
- Company revises workplan as required

Deferral Process (cont.)

Supplemental Remedial Investigation (SRI)

- Conducted by responsible parties
- State oversees field work
- Report findings of study to State/EPA for review

(SRI report describes the extent of contamination at and around the site)
- Company revises report as required

Deferral Process (cont.)

Proposed Remedial Action Plan (RAP)

- Prepared by responsible parties
- Describes alternatives for cleaning up site to meet preliminary cleanup goals established by State (equivalent to feasibility study)
- Identifies preferred remedy and preliminary design
- Submitted for State/EPA review

Deferral Process (cont.)

Conduct Public Meeting and Finalize Remedial Action Plan

- Conduct public meeting and begin 30-day comment period
- Respond to comments and revise remedial action plan and preferred remedy as needed based on public comment
- Finalize remedial design and begin remedial action (cleanup)

Comparison of State Deferral Process with Federal Superfund Process

<u>State Deferral</u>	<u>Federal Superfund (>NPL)</u>
AOC	AOC
RI/SRI Workplan	RI/FS Workplan
SRI and RA Plan	RI/FS
Public Comment & Remedy Selection	Public Comment & Remedy Selection
Remedial Design & Begin Remedial Action	Remedial Design & Begin Remedial Action

State Deferral Time Line

Finalize AOC and Deferral	4 months
Negotiate SRI Plan	8 months
Complete SRI	7 months
Propose RA Plan	7 months
Conduct Public Meeting and Finalize RA Plan	3 months
Begin RA	<u>2 months</u>
Total time from Kickoff to Begin RA	31 months

Time Frames to Remedial Action (RA) Start

Deferral

RA
31 months

National Priorities List

RA
47 months

Similarities Between State Deferral and Federal Superfund Programs

- Process
- Maintains "polluter pays" concept
- State cleanup levels must be at least as protective as EPA cleanup levels
- Ensure community acceptance of deferral and community participation in selecting remedy

What will the State do?

Community Acceptance of Deferral

- Establish local information repository
- Distribute fact sheet
- Provide 14-day advance public notice of public meeting
- Conduct public meeting and availability session
- Explain difference between State and EPA response actions

Community Acceptance of Deferral (continued)

- Establish 30-day public comment period
- Respond to comments
- Provide documentation to EPA indicating no significant, valid, unresolvable objections to the deferral

Proposed Community Participation Activities

- Maintain information repository
- Provide direct information assistance to community as needed
- Provide fact sheets, public notice, public meetings and opportunity for comment after preparation of Draft Remedial Action Plan or sooner as desired by community

Please let us know how we can best involve you in the process!! Tell us what you think!!

Differences Between State Deferral and Federal Superfund Programs

Authority

State Deferral NC Inactive Hazardous Sites Response Act of 1987

Federal Superfund Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Differences Between State Deferral and Federal Superfund Programs

Lead Agency/Support Agency Roles

State Deferral NCDENR is lead agency.
USEPA monitors State activities
and provides support as needed

Federal Superfund USEPA is lead agency.
NCDENR acts in support
role.

Differences Between State Deferral and Federal Superfund Programs

**Will site be listed on the National Priorities
List (NPL)?**

State Deferral No, as long as the State and
EPA are satisfied*

Federal Superfund Yes

Differences Between State Deferral and Federal Superfund Programs

*If at any time during the deferral the responsible parties become uncooperative or EPA is not satisfied with the State's management of the work, the deferral may be terminated. EPA may then resume oversight and management of the cleanup and the site may be listed on the NPL.

(see Memorandum of Agreement for details)

Differences Between State Deferral and Federal Superfund Programs

Oversight Who ensures that responsible parties conduct work properly?

State Deferral State staff directly oversee work conducted by contractors for responsible parties

Federal Superfund EPA staff and their contractors oversee work conducted by contractors for responsible parties

Differences Between State Deferral and Federal Superfund Programs

Technical Assistance Grants (TAGs) to communities

State Deferral Not available

Federal Superfund Available only after site is listed on the National Priorities List (NPL)

TAG=Grants of up to \$50,000 awarded by EPA to communities to hire environmental consultants to assist community in understanding technical data.

Differences Between State Deferral and Federal Superfund Programs

Time Frame to Begin Cleanup

State Deferral

~ 31 months

Federal Superfund

~ 47 months if site first listed on NPL

Differences Between State Deferral and Federal Superfund Programs

	<u>State Deferral</u>	<u>Federal Superfund</u>
Authority	NC IHSRA	CERCLA, SARA
Lead/Support	State/EPA	EPA/State
NPL Listing	No, unless deferral terminated	Yes
Oversight	State staff	EPA/contractors
TAG	No	Yes, after on NPL, ~ 12 months
Begin Cleanup	~ 31 months	~ 47 months

Benefits of State Deferral

Initiate cleanup more quickly

State staff closer to site

Increase on-site oversight

Increase responsiveness

Increase availability to public

Reduce oversight costs (no contractors, and
lower travel costs)

**To comment on the proposed deferral of the
SWP Wilmington site or the draft
Administrative Order on Consent**

- Verbal or written comments tonight
- Written comments (by April 17) to:
Stuart F. Parker, Hydrogeologist
Superfund Section
Division of Waste Management, NCDENR
401 Oberlin Road, Suite 150
Raleigh, NC 27605
Fax: (919) 733-4811
Email: sparker@wastenot.enr.state.nc.us

Other questions or comments?

State Contact: Stuart F. Parker

Telephone: (919) 733-2801 x 277

Alternate Pat DeRosa

(919) 733-2801 x 290



**Southern Wood Piedmont .
Wilmington, NC
Proposed Deferral Public Meeting - March 18, 1999**

Public Comment Record

Questions: _____

Comments: _____

Name: _____
Phone Number: _____
Affiliation: _____

Return to: Stuart F. Parker
NC Superfund Section
401 Oberlin Road, Suite 150
Raleigh, N.C. 27605
(postmarked no later than 4/17/99)



**NOTICE OF PUBLIC MEETING AND
ADMINISTRATIVE ORDER ON CONSENT,
NC DIVISION OF WASTE MANAGEMENT:
SOUTHERN WOOD PIEDMONT SITE
WILMINGTON, NEW HANOVER COUNTY, NC**

The Division of Waste Management, Superfund Section, will conduct a 'kickoff' public meeting at the New Hanover County Public Library, on March 18, 1998 at 6 pm. The purpose of the meeting is to inform the local community about an Administrative Order on Consent (AOC) the Division of Waste Management (Division) intends to enter into with Southern Wood Piedmont Company to conduct assessment and cleanup of hazardous substances at the Southern Wood Piedmont site in Wilmington, NC.

The Southern Wood Piedmont site, located at Greenfield St. and Front St. , was used for wood treating/preserving from the mid-1930s until 1983. Investigations to date indicate soil and groundwater on the property is contaminated by wood-treating chemicals, which are also present in Greenfield Creek, which flows to the Cape Fear River. Dioxin contamination is also present at the site. The site qualifies as a national priority for remedial action under the US Environmental Protection Agency's (EPA) Superfund program. However, EPA will consider deferring federal action at this site while former site operator evaluates and cleans up the site under state authority.

The NC Division of Waste Management reviews and approves plans to evaluate and clean up of hazardous waste sites throughout the state pursuant to N.C.G.S. 130A-310.9(b). The Division intends to enter into an AOC with Southern Wood Piedmont Company to conduct a voluntary cleanup of hazardous substances at the Southern Wood Piedmont site in Wilmington. This voluntary remedial action will be conducted pursuant to N.C.G.S. 130A-310.9(b).

An administrative record housing copies of pertinent documents, including the AOC and deferral program guidance, is available in the information repository located at:

New Hanover County Public Library
Reference Desk
210 Chestnut Street
Wilmington, NC 28101
Telephone: (910) 341-4390

This information is also available at the NC Division of Waste Management, Raleigh, NC

Contact Mr. Scott Ross at (919) 733-2801, ext. 328
to schedule an appointment (Monday-Friday, times vary)

The meeting will begin the 30-day public comment period, and the Division will seek public comment on the draft AOC and on the deferral plan. Oral and written comments will be accepted at the meeting, and written comments will be accepted through the mail during the 30-day comment period. Written comments or questions should be directed to:

Stuart F. Parker, Hydrogeologist
NC Division of Waste Management
Superfund Section
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605
(919) 733-2801, ext. 277
FAX: (919) 733 4811

**ALL WRITTEN COMMENTS ON THE DRAFT AOC AND THE DEFERRAL MUST BE POSTMARKED NO LATER THAN
APRIL 17, 1999.**

[Return to **Morning Star** home page](#)

Cleanup may create industry site, boost downtown development



On-Line edition of the
Morning Star
Wilmington, N.C.

North Carolina's
oldest daily newspaper

[Return to home page](#)

Thursday, March 11, 1999

By BRIAN FEAGANS
Wilmington Morning Star

WILMINGTON, N.C. -- Regulators and economic developers are working on a deal to clean up a former industrial lumberyard on the Cape Fear River, moving the 48-acre site closer to productive use and strengthening plans to develop the downtown waterfront.

Southern Wood Piedmont Co., which operated the lumberyard for a half-century until it closed in 1983, would remove cancer-causing chemicals left behind in the soil under the proposed agreement.

The deal, which will be the subject of a public hearing next Thursday in Wilmington, would shift oversight of the cleanup from the federal government to the state's Superfund program, said Stuart Parker, a hydrologist with the N.C. Division of Waste Management's Superfund section.

By going the state route, the company can keep down costs incurred by a U.S. Environmental Protection Agency cleanup and avoid appearing on the national priority list of Superfund sites, he said.

"For any property owner, there's a stigma for having NPL status," Mr. Parker said.

Unless there are substantial objections from the public, the state plans to investigate how best to clean the site, then let contractors for Southern Wood Piedmont do the work.

The site, owned by the N.C. State Ports Authority, is just north of another 45 acres of undeveloped land the Wilmington port owns near Greenfield and Front streets.

At least two prospective buyers have looked at the property in recent months, said Scott Satterfield, executive director of Wilmington Industrial Development, an industry-hunting group also known as the Committee of 100.

"It is a really valuable site for us to be able to show our clients," said Mr. Satterfield, who would not say what businesses are interested.

The site has access to the river and rail lines at its eastern boundary. But disclosing the pollution problems — soil laced with dioxin and wood-treating wastes such as creosote and arsenic — draws hesitation, Mr. Satterfield said.

"This is definitely good news," he said. "At one point many years ago, that was a vibrant industrial center for Wilmington. We want to see it that way again."

Karen Fox, a spokesman for the port, welcomed a state-led cleanup as well.

The tract is pegged for port expansion, but only after it's cleaned up, she said.

Wilmington officials have pushed a plan to move Almont Shipping Terminals to the former lumberyard and clear its current home on the northern riverfront to expand the downtown commercial center.

Under an agreement signed Jan. 28, Southern Wood Piedmont will pay the EPA \$600,000 to reimburse the agency for investigative costs. The company also would cover state costs to oversee the eventual cleanup, which Mr. Parker said should take roughly two to three years.

After a battery of tests in 1997, the site qualified for the Superfund priority list primarily because of arsenic escaping to Greenfield Creek, which meanders into the Cape Fear.

Nearby residents aren't in danger because of the pollution but should never ingest the soil there or fish in the lower parts of Greenfield Creek, Mr. Parker said.

State investigators know the cancer-causing pollutants have seeped into the soil, but they aren't sure how much has entered the groundwater, he said. They will test to determine the cheapest way to clean up the tract, then make sure the company follows a schedule for getting the job done. Any groundwater work could extend the cleanup by months or even years, Mr. Parker said.

A public hearing on the state's proposed takeover of the cleanup will be at 6 p.m. March 18 at the New Hanover County Public Library.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
100 ALABAMA STREET, S.W.
ATLANTA, GEORGIA 30303-3104

RECEIVED

MAR 07 1997

SUPERFUND SECTION

MAR 04 1997

Mr. William L. Meyer, Director
Division of Waste Management
North Carolina Department of Environment,
Health and Natural Resources
Post Office Box 27687
Raleigh, North Carolina 27611-7687

SUBJECT: Superfund State Deferral Memorandum of Agreement

Dear Mr. Meyer:

The purpose of this letter is to notify you that the Memorandum of Agreement (MOA) between EPA and the State of North Carolina has been signed by Richard D. Green, the Acting Director for the Waste Management Division at EPA. The MOA will give EPA a mechanism through which NPL caliber CERCLA sites will be deferred to the State of North Carolina in order to oversee response actions conducted and funded by potentially responsible parties. The EPA's North Carolina team is eager to receive the deferral letters from the State and begin deferring sites to the State. We believe this MOA will provide the framework for EPA and the State of North Carolina to expedite the Superfund process for high priority sites in North Carolina.

Sincerely,

Philip H. Vorsatz, Chief
North Carolina Site Management
Section

Enclosures

cc: - Jack Butler, NCDEHNR
Pat DeRosa, NCDEHNR

**SUPERFUND STATE DEFERRAL MEMORANDUM OF AGREEMENT
BETWEEN US EPA REGION IV AND THE STATE OF NORTH CAROLINA**

Section I: Background and Purpose

As a result of the Superfund Administrative Improvements initiative to enhance the State role in the Superfund Program, the US EPA issued the "Guidance on Deferral of NPL Listing Determinations While States Oversee Response Actions" in May 1995 (OSWER Directive 9375.6-1 1). This directive provides guidance under which EPA may defer consideration of certain sites for listing on the NPL while interested states compel and oversee response actions conducted and funded by potentially responsible parties. The purpose of this memorandum is to establish that the State of North Carolina (the State) and the US EPA Region IV (the Region) agree that the State has the authority and capability to participate in such a State deferral program.

Section II: State Authority and Program Capability

A. State Authority

In 1987, the State of North Carolina enacted the Inactive Hazardous Sites Response Act (IHSRA) to complement the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). IHSRA authorizes the State to conduct enforcement and oversight activities parallel to those conducted under the federal statute. It also authorizes the State to apply cleanup standards that are at least as protective as federal CERCLA/SARA cleanup standards. A copy of IHSRA is included as Attachment A of this memorandum of agreement. The State intends to use this authority to oversee investigation and response actions at sites deferred to the State by the Region. These sites will be listed in Attachment B of this memorandum.

B. Program Capability

1. Resources

State staff funded through federal cooperative agreements or through the State Inactive Hazardous Sites program will conduct oversight and enforcement activities at deferred sites. Where these activities are conducted using federal cooperative agreement funding, the State shall seek to recover all costs incurred in conducting these site-specific activities from the Potentially Responsible Parties (PRPs) as agreed in an Administrative Order on Consent (AOC) signed with the State. Funds recovered from the PRPs will be used to reimburse the federal program funds from which State staff expenditures were charged.

All response actions will be conducted and funded by the site PRPs as agreed in the AOC with the State. PRPs will also be required to repay any State and Fund-financed response costs related to the deferral should State or Fund-financed response be required.

2. Monitoring and Oversight

The State has sufficient program capabilities and expertise to ensure that "CERCLA-protective" cleanups are conducted and to coordinate with EPA, the public, and other interested federal agencies as identified by EPA on the various phases of site remediation. State staff will conduct all site-related monitoring and oversight activities to ensure adequate supervision of response actions. In addition, the State will provide legal support as needed to negotiate and implement deferral AOCs.

3. Community Participation

The State shall fully involve the affected community and other affected parties at deferred sites by seeking community acceptance of the site-specific deferral and by fostering community participation in the decision-making process for cleanup of deferred sites. The State shall inform the affected community and other affected parties, in accordance with IHSRA, of the proposed deferral of a specific site at least 30 days prior to requesting site deferral from EPA. As appropriate, the State shall explain to the community or other parties any differences between a response conducted under the deferral program with State oversight and a response conducted under the National Contingency Plan with EPA oversight. The State shall document its interactions with the community and inform the Region of such interaction, including but not limited to opposition to the deferral.

If at any time before a site is deferred to the State, the Region after consulting with the State determines that the community or other parties have significant, valid objections to the deferral that cannot be resolved, the Region shall not defer the site. If at any time after a site is deferred to the State, the Region determines that the community or other parties have significant, valid, unresolvable objections to the deferral, the Region shall terminate the deferral status of the site in accordance with Section VII B below. The Region shall provide appropriate explanation to the community and other parties of decisions to defer the site over those parties' objections.

Section III: Eligible Sites

Sites selected for State deferral will be identified in Attachment B of this memorandum. Attachment B will be updated as additional sites are identified for State deferral. Sites will be

selected based on the eligibility criteria specified in the US EPA deferral guidance (OSWER Directive 9375.6-1 1). The sites listed in Attachment B will meet these criteria as summarized below:

1. **State Interest** - The State program director shall submit a written request to the Regional Superfund program director identifying those sites for which the State is requesting deferral. The State and EPA shall agree that the State will address the deferred sites sooner than, or at least as quickly as, EPA would expect to respond.
2. **CERCLIS Listing** - The sites proposed for deferral must be included in the CERCLIS inventory.
3. **NPL Caliber** - The deferred sites should be "NPL caliber" as defined in OSWER directives cited in the deferral guidance.
4. **Viable and Cooperative PRPs** - Viable and cooperative PRPs generally must be available to conduct the response actions at deferred sites. The PRP should be willing to enter into an Administrative Order on Consent (AOC) with the State to conduct all response actions at the site and repay any State and Fund-financed response costs related to the deferral. In addition, PRPs should agree to reimburse the State and EPA for any federally-funded site-specific enforcement or oversight activities conducted at deferred sites.
5. **Timing** - A site shall be eligible for deferral until the State or contractor has been tasked to develop a site-specific Hazard Ranking System (HRS) package for it. If the Region has already tasked package preparation, the Region shall defer the site only where the State provides a "compelling argument" for halting the listing process as discussed in the deferral guidance.
6. **Community Acceptance** - The State shall work to gain and maintain community acceptance of the site's deferral to the State. To do this, the State shall take appropriate steps to inform the affected community and other affected parties of the proposed deferral at least 30 days prior to requesting that the Region defer the site and shall seek affirmation from the community of its proposal.
7. **Sites Involving Tribal Lands** - EPA will not defer such a site to the State unless the affected Tribe agrees to a deferral through a three-party agreement with the State and the Region.
8. **Federal Facilities** - Federal facilities are ineligible for deferral from NPL listing.
9. **Complicating Factors** - The Region, in consultation with the State, shall consider factors which may present significant obstacles to successful response actions at

proposed deferral sites. Potentially complicating factors are discussed in the deferral guidance.

Once the State and Region IV agree on which sites to defer to the State, the Regional Superfund program director will identify those sites in writing to the State program director. Acknowledgement of this deferral will be in writing from the State program director to the Regional Superfund program director. Written acknowledgement will include revision of Attachment B of this memorandum updating the list of deferred sites. Attachment B will be updated as additional sites are identified for State deferral.

Section IV: Cleanup Levels

At deferred sites, the State shall ascertain and assure compliance with the cleanup standards that would be applied under CERCLA/SARA, as specified in the State statute ((NCGS Sect. 130A-310.3(d)). The State shall assure that the remedy selected complies with all applicable or relevant and appropriate State and Federal requirements. State standards may exceed and be more comprehensive than the federal standards.

Section V: Roles and Responsibilities

A. Schedule for Performance

Upon written notice to the Region, the State shall initiate negotiations with PRPs to finalize an Administrative Order on Consent (AOC) between the State and the PRPs for site remediation. If negotiations are not complete within six months (180 days) of initiation, the Region shall consider termination of the deferral and may proceed with the NPL listing process. At the State's request, the Region may allow the State up to six additional months to conclude negotiations.

Concurrent with initiation of negotiations, the State shall submit to the Region a draft schedule of deferral activities. This schedule shall identify major milestones by which EPA can track reasonable progress at each deferred site. A model schedule of deferral activities with approximate timeframes is included as Attachment C of this memorandum.

B. Documentation and Reporting

The State agrees to provide to the Region all major documents and significant correspondence for each deferred site, including notice when remedial action construction is complete. The State shall also provide an updated schedule of deferral activities and progress report to the Region on a quarterly basis.

C. Community Participation

As described above in Section II B.3 and Section III 6, the State shall involve the affected

community in the decision-making process at a deferred site and assure that the affected community does not have significant, valid objections to deferring the site to the State. In addition, the State shall mail notice of the proposed deferral AOC in accordance with NCGS Section 130A-310.9(b) as shown in Attachment A.

As public information, all site files are maintained and available for review and photocopying by the public at the offices of the Superfund Section in Raleigh, NC. In order to ensure the availability of site documents to the affected community, the State shall also establish a local information repository in the community where the site is located.

Section VI: Funding

Funding for State oversight and enforcement activities at deferred sites will be provided by PRPs as specified in the Administrative Order on Consent signed with the State. Prepayment or repayment of State costs by PRPs will be a condition of deferral. State staff funded under cooperative agreements with EPA will document their time and other expenditures associated with site-specific deferral activities such that these expenditures may be repaid to EPA.

All response actions will be conducted and funded by the site PRPs as agreed in an Administrative Order on Consent with the State. PRPs will also be required to repay any State and Fund-financed response costs related to the deferral should State or Fund-financed response be required.

Section VII: Completion of Deferral Response Action

A. Certification and Confirmation

Once the State determines that the response action is achieving the performance standards established in the remedy selected for the deferred site, the State shall certify to the Region and the affected community that the PRPs have successfully completed the response. As part of the certification, the State should submit to the Region response action completion documentation substantially similar to that described in the June 1992 OSWER "Remedial Action Report; Documentation for Operable Unit Completion" (OSWER Directive 9355.0-39FS).

Within 120 days after receipt of the State's certification, the Region shall confirm in writing that the response is achieving the performance standards set out in the remedy or initiate a deferral completion inquiry to validate the certification. As part of the inquiry, the Region shall work with the State to address any deficiencies hindering the confirmation and agree to a timeframe for completion of the inquiry. Upon completing the inquiry, the Region shall either confirm completion of the response or terminate the deferral status of the site. If the Region does not confirm the response completion, terminate the deferral, or initiate an inquiry within 120 days of its receipt of the State certification, the status of the site will be recorded in CERCLIS as a deferral completion. Once the response at the site is recorded in CERCLIS as complete, the site will be removed from

CERCLIS and will not be evaluated further for NPL listing or another response unless EPA receives new information of a release or potential release at the site that poses a significant threat to human health or the environment.

B. Termination of Site Deferral Status

Pending 30 days notice to and after consultation with the State, the Region may terminate the deferral status of the site if, at any time during or upon completion of a response action, the Region determines that the response is not CERCLA-protective, is unreasonably delayed or inappropriate, or does not adequately address the affected community's concerns. The Region also may terminate the deferral if significant PRPs breach their agreements with the State and the State fails within a reasonable period to enforce compliance or provide other sources of funding to complete the response action. In addition, the Region may terminate the deferral and implement emergency or time-critical response action without 30 days notice to the State if the Region determines such action is necessary. The State may also choose at any time, after 30 days notice, to terminate the deferral for any reason.

Upon terminating the deferral status of the site, the Region may immediately consider taking any necessary response actions and may initiate consideration of the site for NPL listing. The Region and State shall coordinate efforts to notify the community and PRPs of the termination of the deferral. At the Region's request, the State shall provide to the Region all information in its possession regarding the site for which the deferral status has been terminated.

Section VIII: Signature of Agreement

This Memorandum of Agreement is entered into on the 26th day of Feb. 1997.

By: William L. Meyer
William L. Meyer, Director
Division of Waste Management
North Carolina Department of Environment, Health and Natural Resources

By: Richard D. Green
Richard D. Green, Acting Director
Waste Management Division Region IV
U.S. Environmental Protection Agency

ATTACHMENT A

Inactive Hazardous Sites Response Act (IHSRA)
NCGS 130A 310, et seq.

§ 130A-309.85. (Effective July 1, 1999) Department to submit annual report on the management of white goods.

The Department shall make an annual report to the Environmental Review Commission concerning the management of white goods. The report shall be submitted by October 1 of each year, shall cover the fiscal year ending on the preceding June 30, and shall include the cost to each county of managing white goods during the period covered by the report, the additional fees on white goods collected by each county during the period covered by the report, and any other information the Department considers helpful in understanding the problem of managing white goods. (1993, c. 471, ss. 4, 9.)

Section Set Out Twice. — The section above is effective July 1, 1999. For the section as in effect until July 1, 1999, see the preceding section, also numbered § 130A-309.85.

Effect of Amendments. — Session Laws 1993, c. 471, s. 9, effective July 1, 1999, substituted "the cost to each

county of managing white goods during the period covered by the report, the additional fees on white goods collected by each county during the period covered by the report, and any" following "shall include" for former subdivisions (1), (2), (3), and (4) which specified information to be included in the report.

§ 130A-309.86. Effect on local ordinances.

This Part preempts any local ordinance regarding the management of white goods that is inconsistent with this Part or the rules adopted pursuant to this Part. It does not preempt any local ordinance regarding the management of white goods that is consistent with this Part or rules adopted pursuant to this Part. (1993, c. 471, s. 4.)

Part 3. Inactive Hazardous Sites.

§ 130A-310. Definitions.

Unless a different meaning is required by the context, the following definitions shall apply throughout this Part:

- (1) "CERCLA/SARA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. 96-510, 94 Stat. 2767, 42 U.S.C. 9601 et seq., as amended, and the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, 100 Stat. 1613, as amended.
- (2) "Hazardous substance" means hazardous substance as defined in CERCLA/SARA.
- (3) "Inactive hazardous substance or waste disposal site" or "site" means any facility, structure, or area where disposal of any hazardous substance or waste has occurred. Such sites do not include hazardous waste facilities permitted or in interim status under this Article.
- (4) "Operator" means the person responsible for the overall operation of an inactive hazardous substance or waste disposal site.
- (5) "Owner" means any person who owns an inactive hazardous substance or waste disposal site, or any part thereof.
- (6) "Release" means release as defined in the CERCLA/SARA.

- (7) "Remedy" or "Remedial Action" means remedy or remedial action as defined in CERCLA/SARA.
- (8) "Remove" or "Removal" means remove or removal as defined in CERCLA/SARA.
- (9) "Responsible party" means any person who is liable pursuant to G.S. 130A-310.7. (1987, c. 574, s. 2; 1989, c. 286, s. 2.)

Editor's Note. — Section 4 of Session Laws 1987, c. 574, provided: "This act shall not be construed to obligate the General Assembly to make any appropriation to implement the provisions of this act; nor shall it be construed to obligate the Secretary to implement any monitoring program, testing program, or inactive hazardous substance or waste disposal site remedial action program for which no funding is available, from appropriations or otherwise."

§ 130A-310.1. Identification, inventory, and monitoring of inactive hazardous substance or waste disposal sites.

(a) Within six months of July 1, 1987, the Department shall develop and implement a program for locating, cataloguing, and monitoring all inactive hazardous substance or waste disposal sites in North Carolina. The Secretary shall compile and maintain an inventory of all such sites based on information submitted by owners, operators, and responsible parties, and on data obtained directly by the Secretary. The inventory shall include any evidence of contamination to the air, surface water, groundwater, surface or subsurface soils, or waste streams. The inventory shall indicate the extent of any actual damage or potential danger to public health or to the environment resulting from such contamination.

(b) Within six months of July 1, 1987, the Commission shall develop and make available a format and checklist for submission of data relevant to inactive hazardous substance or waste disposal sites. Within 90 days thereafter, each owner, operator, or responsible party shall submit to the Secretary all such site data as is known or readily available to him. The owner, operator, or responsible party shall certify under oath that, to the best of his knowledge and belief, such data is complete and accurate.

(c) Whenever the Secretary determines that there is a release, or substantial threat of a release, into the environment of a hazardous substance from an inactive hazardous substance or waste disposal site, the Secretary may, in addition to any other powers he may have, order any responsible party to conduct such monitoring, testing, analysis, and reporting as the Secretary deems reasonable and necessary to ascertain the nature and extent of any hazard posed by the site. Written notice of any order issued pursuant to this section shall be given to all persons subject to the order as set out in G.S. 130A-310.3(c). The Secretary, prior to the entry of any such order, shall solicit the cooperation of the responsible party.

(d) If a person fails to submit data as required in subsection (b) of this section or violates the requirements or schedules in an order issued pursuant to subsection (c) of this section, the Secretary may institute an action for injunctive relief, irrespective of all other remedies at law, in the superior court of the county where the violation occurred or where a defendant resides.

(e) Whenever a person ordered to take any action pursuant to this section is unable or fails to do so, or if the Secretary, after making a

reasonable attempt, is unable to locate any responsible party, the Secretary may take such action. The cost of any action by the Secretary pursuant to this section may be paid from the Inactive Hazardous Sites Cleanup Fund, subject to a later action for reimbursement pursuant to G.S. 130A-310.7. The provisions of subdivisions (a)(1) to (a)(3) of G.S. 130A-310.6 shall apply to any action taken by the Secretary pursuant to this section. (1987, c. 574, s. 2; 1989, c. 286, s. 3.)

§ 130A-310.2. Inactive Hazardous Waste Sites Priority List.

No later than six months after July 1, 1987, the Commission shall develop a system for the prioritization of inactive hazardous substance or waste disposal sites based on the extent to which such sites endanger the public health and the environment. The Secretary shall apply the prioritization system to the inventory of sites to create and maintain an Inactive Hazardous Waste Site Priority List, which shall rank all inactive hazardous substance or waste disposal sites in decreasing order of danger. This list shall identify the location of each site and the type and amount of hazardous substances or waste known or believed to be located on the site. The first such list shall be published within two years after July 1, 1987, with subsequent lists to be published at intervals of not more than two years thereafter. The Secretary shall notify owners, operators, and responsible parties of sites listed on the Inactive Hazardous Waste Sites Priority List of their ranking on the list. The Inactive Hazardous Sites Priority List shall be used by the Department in determining budget requests and in allocating any State appropriation which may be made for remedial action, but shall not be used so as to impede any other action by the Department, or any remedial or other action for which funds are available. (1987, c. 574, s. 2.)

§ 130A-310.3. Remedial action programs for inactive hazardous substance or waste disposal sites.

(a) The Secretary may issue a written declaration, based upon findings of fact, that an inactive hazardous substance or waste disposal site endangers the public health or the environment. After issuing such a declaration, and at any time during which the declaration is in effect, the Secretary shall be responsible for:

- (1) Monitoring the inactive hazardous substance or waste disposal site;
- (2) Developing a plan for public notice and for community and local government participation in any inactive hazardous substance or waste disposal site remedial action program to be undertaken;
- (3) Approving an inactive hazardous substance or waste disposal site remedial action program for the site;
- (4) Coordinating the inactive hazardous substance or waste disposal site remedial action program for the site; and
- (5) Ensuring that the hazardous substance or waste disposal site remedial action program is completed.

(b) Where possible, the Secretary shall work cooperatively with any owner, operator, responsible party, or any appropriate agency of

the State or federal government to develop and implement the inactive hazardous substance or waste disposal site remedial action program. The Secretary shall not take action under this section to the extent that the Environmental Management Commission, the Commissioner of Agriculture, or the Pesticide Board has assumed jurisdiction pursuant to Articles 21 or 21A of Chapter 143 of the General Statutes.

(c) Whenever the Secretary has issued such a declaration, and at any time during which the declaration is in effect, the Secretary may, in addition to any other powers he may have, order any responsible party:

- (1) To develop an inactive hazardous substance or waste disposal site remedial action program for the site subject to approval by the Department, and
- (2) To implement the program within reasonable time limits specified in the order.

Written notice of such an order shall be provided to all persons subject to the order personally or by certified mail. If given by certified mail, notice shall be deemed to have been given on the date appearing in the return of the receipt. If giving of notice cannot be accomplished either personally or by certified mail, notice shall be given as provided in G.S. 1A-1, Rule 4(j).

(d) In any inactive hazardous substance or waste disposal site remedial action program implemented hereunder, the Secretary shall ascertain the most nearly applicable cleanup standard as would be applied under CERCLA/SARA, and may seek federal approval of any such program to insure concurrent compliance with federal standards. State standards may exceed and be more comprehensive than such federal standards. The Secretary shall assure concurrent compliance with applicable standards set by the Environmental Management Commission.

(e) For any removal or remedial action conducted entirely on-site under this Part, to the extent that a permit would not be required under 42 U.S.C § 9621(e) for a removal or remedial action conducted entirely on-site under CERCLA/SARA, the Secretary may grant a waiver from any State law or rule that requires that an environmental permit be obtained from the Department. The Secretary shall not waive any requirement that a permit be obtained unless the owner, operator, or other responsible party has entered into an agreement with the Secretary to implement a voluntary remedial action plan under G.S. 130A-310.9(b). Prior to granting a permit waiver, the Secretary shall invite public participation in the development of the remedial action plan in the manner set out in G.S. 130A-310.4. (1987, c. 574, s. 2; 1989, c. 727, s. 145; 1991, c. 281, ss. 1, 2.)

§ 130A-310.4. Public participation in the development of the remedial action plan.

(a) Within 10 days after the Secretary issues a declaration pursuant to G.S. 130A-310.3, he shall notify in writing the local board of health and the local health director having jurisdiction in the county or counties in which an inactive hazardous substance or waste disposal site is located that the site may endanger the public health or environment and that a remedial action plan is being developed. The Secretary shall involve the local health director in the development of the remedial action plan.

(b) Before approving any remedial action plan, the Secretary shall make copies of the proposed plan available for inspection as follows:

- (1) A copy of the plan shall be provided to the local health director.
- (2) A copy of the proposed plan shall be filed with the register of deeds in the county or counties in which the site is located.
- (3) A copy of the plan shall be provided to each public library located in the county or counties in which the site is located.
- (4) The Secretary may place copies of the plan in other locations so as to assure the availability thereof to the public.

In addition, copies of the plan shall be available for inspection and copying at cost by the public during regular business hours in the offices of the agency within the Department with responsibility for the administration of the remedial action program.

(c) Before approving any remedial action plan, the Secretary shall give notice of the proposed plan as follows:

- (1) A notice and summary of the proposed plan shall be published weekly for a period of three consecutive weeks in a newspaper having general circulation in the county or counties where the site is located.
- (2) Notice that a proposed remedial action plan has been developed shall be given by first class mail to persons who have requested such notice. Such notice shall state the locations where a copy of the remedial action plan is available for inspection. The Department shall maintain a mailing list of persons who request notice pursuant to this section.

(d) The Secretary may conduct a public meeting to explain the proposed plan and alternatives to the public.

(e) At least 45 days from the latest date on which notice is provided pursuant to subsection (c) of this section shall be allowed for the receipt of written comment on the proposed remedial action plan prior to its approval. If a public hearing is held pursuant to subsection (f) of this section, at least 20 days will be allowed for receipt of written comment following the hearing prior to the approval of the remedial action plan.

(f) If the Secretary determines that significant public interest exists, he shall conduct a public hearing on the proposed plan and alternatives. The Department shall give notice of the hearing at least 30 days prior to the date thereof by:

- (1) Publication as provided in subdivision (c)(1) of this section, with first publication to occur not less than 30 days prior to the scheduled date of the hearing; and
- (2) First class mail to persons who have requested notice as provided in subdivision (c)(2) of this section.

(g) The Commission on Health Services shall adopt rules prescribing the form and content of the notices required by this section. The proposed remedial action plan shall include a summary of all alternatives considered in the development of the plan. A record shall be maintained of all comment received by the Department regarding the remedial action plan. (1987, c. 574, s. 2.)

§ 130A-310.5. Authority of the Secretary with respect to sites which pose an imminent hazard.

(a) An imminent hazard exists whenever the Secretary determines, that there exists a condition caused by an inactive hazardous substance or waste disposal site, including a release or a substantial threat of a release into the environment of a hazardous substance from the site, which is causing serious harm to the public health or environment, or which is likely to cause such harm before a remedial action plan can be developed. Whenever the Secretary determines that an imminent hazard exists he may, in addition to any other powers he may have, without notice or hearing, order any known responsible party to take immediately any action necessary to eliminate or correct the condition, or the Secretary, in his discretion, may take such action without issuing an order. Written notice of any order issued pursuant to this section shall be provided to all persons subject to the order as set out in G.S. 130A-310.3(c). Unless the time required to do so would increase the harm to the public health or the environment, the Secretary shall solicit the cooperation of responsible parties prior to the entry of any such order. The provisions of subdivisions (1) to (3) of G.S. 130A-310.6(a) shall apply to any action taken by the Secretary pursuant to this section, and any such action shall be considered part of a remedial action program, the cost of which may be recovered from any responsible party.

(b) If a person violates the requirements or schedules in an order issued pursuant to this section, the Secretary may institute an action for injunctive relief, irrespective of all other remedies at law, in the superior court of the county where the violation occurred or where a defendant resides.

(c) The cost of any action by the Secretary pursuant to this section may be paid from the Inactive Hazardous Sites Cleanup Fund, or the Emergency Response Fund established pursuant to G.S. 130A-306, subject to a later action for reimbursement pursuant to G.S. 130A-310.7. (1987, c. 574, s. 2; 1989, c. 286, s. 4; 1989 (Reg. Sess., 1990), c. 1004, s. 9; c. 1024, s. 30(a); 1991, c. 342, s. 8.)

§ 130A-310.6. State action upon default of responsible parties or when no responsible party can be located.

(a) Whenever a person ordered to develop and implement an inactive hazardous substance or waste disposal site remedial action program is unable or fails to do so within the time specified in the order, the Secretary may develop and implement or cause to be developed and implemented such a program. The cost of developing and implementing a remedial action program pursuant to this section may be paid from the Inactive Hazardous Sites Cleanup Fund, subject to a later action for reimbursement pursuant to G.S. 130A-310.7.

(1) The Department is authorized and empowered to use any staff, equipment or materials under its control or provided by other cooperating federal, State or local agencies and to contract with any agent or contractor it deems appropriate to develop and implement the remedial action program.

State agencies shall provide the maximum extent feasible such staff, equipment, and materials as may be available for developing and implementing a remedial action program.

- (2) Upon completion of any inactive hazardous substance or waste disposal remedial action program, any State or local agency that has provided personnel, equipment, or material shall deliver to the Department a record of expenses incurred by the agency. The amount of the incurred expenses shall be disbursed by the Secretary to each such agency. The Secretary shall keep a record of all expenses incurred for the services of State personnel and for the use of the State's equipment and material.
- (3) As soon as feasible or after completion of any inactive hazardous substance or waste disposal site remedial action program, the Secretary shall prepare a statement of all expenses and costs of the program expended by the State and issue an order demanding payment from responsible parties. Written notice of such an order shall be provided to all persons subject to the order personally or by certified mail. If given by certified mail, notice shall be deemed to have been given on the date appearing on the return of the receipt. If giving of notice cannot be accomplished either personally or by certified mail, notice shall then be given as provided in G.S. 1A-1, Rule 4(j).
- (b) If the Secretary, after declaring that an inactive hazardous substance or waste disposal site may endanger the public health or the environment, is unable, after making a reasonable attempt, to locate any responsible party, the Department may develop and implement a remedial action program for the site as provided in subsection (a)(1) and (2) of this section. If responsible parties are subsequently located, the Secretary may issue an order demanding payment from such persons in the manner set forth in subdivision (a)(3) of this section for the necessary expenses incurred by the Department for developing and implementing the remedial action program. If the persons subject to such an order refuse to pay the sum expended, or fail to pay such sum within the time specified in the order, the Secretary shall bring an action in the manner set forth in G.S. 130A-310.7. (1987, c. 574, s. 2; 1989, c. 286, s. 5.)

§ 130A-310.7. Action for reimbursement; liability of responsible parties.

(a) Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in this subsection, any person who:

- (1) Discharges or deposits; or
- (2) Contracts or arranges for any discharge or deposit; or
- (3) Accepts for discharge or deposit; or
- (4) Transports or arranges for transport for the purpose of discharge or deposit

any hazardous substance, the result of which discharge or deposit is the existence of an inactive hazardous substance or waste disposal site, shall be considered a responsible party. Neither an innocent landowner who is a bona fide purchaser of the inactive hazardous substance or waste disposal site without knowledge or without a

reasonable basis for knowing that hazardous substance or waste disposal had occurred nor a person whose interest or ownership in the inactive hazardous substance or waste disposal site is based on or derived from a security interest in the property shall be considered a responsible party. A responsible party shall be directly liable to the State for any or all of the reasonably necessary expenses of developing and implementing a remedial action program for such site. The Secretary shall bring an action for reimbursement of the Inactive Hazardous Sites Cleanup Fund in the name of the State in the superior court of the county in which the site is located to recover such sum and the cost of bringing the action. The State must show that a danger to the public health or the environment existed and that the State complied with the provisions of this Part.

(b) There shall be no liability under this section for a person who can establish by a preponderance of the evidence that the danger to the public health or the environment caused by the site was caused solely by:

- (1) An act of God; or
- (2) An act of war; or
- (3) An intentional act or omission of a third party (but this defense shall not be available if the act or omission is that of an employee or agent of the defendant, or if the act or omission occurs in connection with a contractual relationship with the defendant); or
- (4) Any combination of the above causes. (1987, c. 574, s. 2; 1989, c. 286, s. 6; 1989 (Reg. Sess., 1990), c. 1004, s. 10; c. 1024, s. 30(b).)

§ 130A-310.8. Recordation of inactive hazardous substance or waste disposal sites.

(a) After determination by the Department of the existence and location of an inactive hazardous substance or waste disposal site, the owner of the real property on which the site is located, within 180 days after official notice to him to do so, shall submit to the Department a survey plat of areas designated by the Department which has been prepared and certified by a professional land surveyor, and entitled "NOTICE OF INACTIVE HAZARDOUS SUBSTANCE OR WASTE DISPOSAL SITE". The Notice shall include a legal description of the site that would be sufficient as a description in an instrument of conveyance, shall meet the requirements of G.S. 47-30 for maps and plats, and shall identify:

- (1) The location and dimensions of the disposal areas with respect to permanently surveyed benchmarks; and
- (2) The type, location, and quantity of hazardous substances disposed of on the site, to the best of the owner's knowledge.

Where an Inactive Hazardous Substance or Waste Disposal Site is located on more than one parcel or tract of land, a composite map or plat showing all such sites may be recorded.

(b) After the Department approves and certifies the Notice, the owner of the site shall file the certified copy of the Notice in the register of deeds' office in the county or counties in which the land is located.

(c) The register of deeds shall record the certified copy of the Notice and index it in the grantor index under the names of the owners of the lands.

(d) In the event that the owner of the fails to submit and file the Notice required by this section within the time specified, the Secretary may prepare and file such Notice. The costs thereof may be recovered by the Secretary from any responsible party. In the event that an owner of a site who is not a responsible party submits and files the Notice required by this section, he may recover the reasonable costs thereof from any responsible party.

(e) When an inactive hazardous substance or waste disposal site is sold, leased, conveyed, or transferred, the deed or other instrument of transfer shall contain in the description section, in no smaller type than that used in the body of the deed or instrument, a statement that the property has been used as a hazardous substance or waste disposal site and a reference by book and page to the recordation of the Notice.

(f) A Notice of Inactive Hazardous Substance or Waste Disposal Site shall be cancelled by the Secretary after the hazards have been eliminated. The Secretary shall send to the register of deeds of the county where the Notice is recorded a statement that the hazards have been eliminated and request that the Notice be cancelled of record. The Secretary's statement shall contain the names of the landowners as shown in the Notice and reference the plat book and page where the Notice is recorded. The register of deeds shall record the Secretary's statement in the deed books and index it on the grantor index in the name of the landowner as shown in the Notice and on the grantee index in the name "Secretary of Environment, Health, and Natural Resources". The register of deeds shall make a marginal entry on the Notice showing the date of cancellation and the book and page where the Secretary's statement is recorded, and the register shall sign the entry. If a marginal entry is impracticable because of the method used to record maps and plats, the register of deeds shall not be required to make a marginal entry.

(g) This section shall apply with respect to any facility, structure, or area where disposal of any hazardous substance or waste has occurred which is undergoing voluntary remedial action pursuant to this Part. (1987, c. 574, s. 2; 1989, c. 727, s. 219(34); 1989 (Reg. Sess., 1990), c. 1004, s. 19(b).)

§ 130A-310.9. Voluntary remedial actions; maximum financial responsibility; agreements; implementation and oversight by private engineering and consulting firms.

(a) No one owner, operator, or other responsible party who voluntarily participates in the implementation of a remedial action program under G.S. 130A-310.3 or G.S. 130A-310.5 may be required to pay in excess of three million dollars (\$3,000,000) for the cost of implementing a remedial action program at a single inactive hazardous substance or waste disposal site. The limitation of liability contained in this section applies only to the cost of implementation of the program and does not apply to the cost of the development of the remedial action plan.

(b) The Secretary may enter into an agreement with an owner, operator, or other responsible party which provides for implementation of a voluntary remedial action program in accordance with a

remedial action plan approved by the Department. Investigations, evaluations, and voluntary remedial actions are subject to the provisions of G.S. 130A-310.1(c), 130A-310.1(d), 130A-310.3(d), 130A-310.5, 130A-310.8, and any other requirement imposed by the Department. A voluntary remedial action and all documents that relate to the voluntary remedial action shall be fully subject to inspection and audit by the Department. At least 30 days prior to entering into any agreement providing for the implementation of a voluntary remedial action program, the Secretary shall mail notice of the proposed agreement as provided in G.S. 130A-310.4(c)(2). Sites undergoing voluntary remedial actions shall be so identified as a separate category in the inventory of sites maintained pursuant to G.S. 130A-310.1 but shall not be included on the Inactive Hazardous Waste Sites Priority List required by G.S. 130A-310.2.

(c) The Department may approve a private environmental consulting and engineering firm to implement and oversee a voluntary remedial action by an owner, operator, or other responsible party. An owner, operator, or other responsible party who enters into an agreement with the Secretary to implement a voluntary remedial action may hire a private environmental consulting or engineering firm approved by the Department to implement and oversee the voluntary remedial action. A voluntary remedial action that is implemented and overseen by a private environmental consulting or engineering firm shall be implemented in accordance with all federal and State laws, regulations, and rules that apply to remedial actions generally and is subject to rules adopted pursuant to G.S. 130A-310.12(b). The Department may revoke its approval of the oversight of a voluntary remedial action by a private environmental consulting or engineering firm and assume direct oversight of the voluntary remedial action whenever it appears to the Department that the voluntary remedial action is not being properly implemented or is not being adequately overseen. The Department may require the owner, operator, other responsible party, or private environmental consulting or engineering firm to take any action necessary to bring the voluntary remedial action into compliance with applicable requirements. (1987, c. 574, s. 2; 1989, c. 286, s. 7; 1993 (Reg. Sess., 1994), c. 598, s. 1; 1995, c. 327, s. 2.)

Editor's Note. — Session Laws 1993 (Reg. Sess., 1994), c. 598, which amended this section, in s. 4, provides: "The Environmental Review Commission may study, in cooperation with personnel designated by the Secretary of Environment, Health, and Natural Resources, the possible implementation of a program that would use licensed site professionals to oversee voluntary and other remedial actions by responsible parties in lieu of oversight by State personnel, the procedures and standards that would govern the designation and licensing of licensed site professionals,

the functions of licensed site professionals, and the weight to be accorded by a State agency to any work overseen and approved by a licensed site professional."

Effect of Amendments. — The 1993 (Reg. Sess., 1994) amendment, effective January 1, 1995, substituted the present catchline for "Maximum financial responsibility; voluntary remedial actions"; added the third sentence in subsection (b); added subsection (c); and made stylistic changes.

The 1995 amendment, effective June 26, 1995, rewrote subsection (c).

§ 130A-310.10. Annual report

(a) The Secretary shall present an annual report to the General Assembly and the Environmental Review Commission which shall include at least the following:

- (1) The Inactive Hazardous Waste Sites Priority List;
- (2) A list of remedial action plans requiring State funding through the Inactive Hazardous Sites Cleanup Fund;
- (3) A comprehensive budget to implement these remedial action plans and the adequacy of the Inactive Hazardous Sites Cleanup Fund to fund the cost of said plans;
- (4) A prioritized list of sites that are eligible for remedial action under CERCLA/SARA together with recommended remedial action plans and a comprehensive budget to implement such plans. The budget for implementing a remedial action plan under CERCLA/SARA shall include a statement as to any appropriation that may be necessary to pay the State's share of such plan;
- (5) A list of sites and remedial action plans undergoing voluntary cleanup with Departmental approval;
- (6) A list of sites and remedial action plans that may require State funding, a comprehensive budget if implementation of these possible remedial action plans is required, and the adequacy of the Inactive Hazardous Sites Cleanup Fund to fund the possible costs of said plans;
- (7) A list of sites which pose an imminent hazard;
- (8) A comprehensive budget to develop and implement remedial action plans for sites that pose imminent hazards and that may require State funding, and the adequacy of the Inactive Hazardous Sites Cleanup Fund; and
- (9) Any other information requested by the General Assembly or the Environmental Review Commission.

(b) The annual reports required by this section shall be made by the Secretary on 15 February of each year beginning 15 February 1990. (1987, c. 574, s. 2; 1989, c. 286, s. 8.)

§ 130A-310.11. Inactive Hazardous Sites Cleanup Fund created.

There is established under the control and direction of the Department the Inactive Hazardous Sites Cleanup Fund. This fund shall be a revolving fund consisting of any monies appropriated for such purpose by the General Assembly or available to it from grants, fees, and other monies paid to it or recovered by or on behalf of the Department. The Inactive Hazardous Sites Cleanup Fund shall be treated as a nonreverting special trust fund and shall be credited with interest by the State Treasurer pursuant to G.S. 147-69.2 and G.S. 147-69.3. (1987, c. 574, s. 2; 1989, c. 286, s. 9.)

§ 130A-310.12. Administrative procedure; adoption of rules.

(a) The provisions of Chapter 150B of the General Statutes apply to this Part. The Commission shall adopt rules for the implementation of this Part.

(b) The Commission shall adopt rules governing the selection and use of private environmental consulting and engineering firms to

implement and oversee voluntary remedial actions by owners, operators, or other responsible parties under G.S. 130A-310.9(c). Rules adopted under this subsection shall specify:

- (1) Standards applicable to private environmental consulting and engineering firms.
- (2) Criteria and procedures for approval of firms by the Department.
- (3) Requirements and procedures under which the Department monitors and audits a voluntary remedial action to ensure that the voluntary remedial action complies with applicable federal and State law, regulations, and under which the owner, operator, or other responsible party reimburses the Department for the cost of monitoring and auditing the voluntary remedial action.
- (4) Any financial assurances that may be required of an owner, operator, or other responsible party.
- (5) Requirements for the preparation, maintenance, and public availability of work plans and records, reports of data collection including sampling, sample analysis, and other site testing, and other records and reports that are consistent with the requirements applicable to remedial actions generally. (1987, c. 574, ss. 2, 5; 1993 (Reg. Sess., 1994), c. 598, s. 2; 1995, c. 327, s. 3.)

Editor's Note. — Session Laws 1993 (Reg. Sess., 1994), c. 598, which amended this section, in s. 4, provides: "The Environmental Review Commission may study, in cooperation with personnel designated by the Secretary of Environment, Health, and Natural Resources, the possible implementation of a program that would use licensed site professionals to oversee voluntary and other remedial actions by responsible parties in lieu of oversight by State personnel, the procedures and standards that would govern the designation and licensing of licensed site professionals, the functions of licensed site professionals, and the weight to be accorded by a State agency to any work overseen and approved by a licensed site professional."

Session Laws 1993 (Reg. Sess., 1994), c. 598, which amended this section, in s. 5 provides in part: "Rules adopted pursuant to G.S. 130A-310.12(b), as enacted by Section 2 of this act, shall not become effective prior to 1 January 1995."

Effect of Amendments. — The 1993 (Reg. Sess., 1994) amendment, effective July 1, 1994, added the subsection (a) designation; in subsection (a), in the first sentence deleted from the beginning "Except as may be otherwise specifically provided" and inserted "of the General Statutes", in the second sentence deleted "pursuant to Chapter 150B of the General Statutes, administrative" preceding "adopt," deleted from the end "not later than six months after enactment," deleted the third sentence which read "Such rules may be the same as or similar to the federal rules for implementation of CERCLA/SARA"; and added subsection (b).

The 1995 amendment, effective June 26, 1995, in subsection (b), substituted "consulting and engineering" for "engineering and consulting" in the introductory language, rewrote subdivisions (b)(2), (b)(3) and (b)(4), and added subdivision (b)(5).

§ 130A-310.13. Short title.

This Part shall be known and may be cited as the Inactive Hazardous Sites Response Act of 1987. (1991, c. 281, s. 3.)

Part 4. Superfund Program.

§ 130A-310.20. Definitions.

Unless a different meaning is required by the context, the following definitions shall apply throughout this Part:

- (1) "CERCLA/SARA" or "Superfund" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767, 42 U.S.C. § 9601 et seq., as amended, and the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613, as amended. (1989, c. 286, s. 10.)

Editor's Note. — As enacted, this section contained a subdivision (1) but no subdivision (2).

§ 130A-310.21. Administration of the Superfund program.

The Department shall maintain an appropriate administrative subunit within the solid waste management unit authorized by G.S. 130A-291 to carry out those activities in which the State is authorized to engage under CERCLA/SARA. (1989, c. 286, s. 10.)

§ 130A-310.22. Contracts authorized.

(a) The Department is authorized to enter into contracts and cooperative agreements with the United States and to engage in any activity otherwise authorized by law to identify, investigate, evaluate, and clean up any site or facility covered by CERCLA/SARA including but not limited to performing preliminary assessments, site investigations, remedial investigations, and feasibility studies; preparation of records of decision; conducting emergency response, remedial, and removal actions; and engaging in enforcement activities in accordance with the provisions of CERCLA/SARA.

(b) The Department may make all assurances required by federal law or regulation including but not limited to assuring that the State will assume responsibility for the operation and maintenance of any remedial action for the anticipated duration of the remedial action; assuring that the State will provide its share of the cost of any remedial action at a site or facility which was privately owned or operated; assuring that the State will provide its share of the cost of any removal, remedial planning, and remedial action at a site or facility owned or operated by the State or a political subdivision of the State; assuring the availability of off-site treatment, storage, or disposal capacity needed to effectuate a remedial action; assuring that the State will take title to, acquire an interest in, or accept transfer of any interest in real property needed to effectuate a remedial action; assuring that the State has adequate capacity to meet the assurances required by CERCLA/SARA (42 U.S.C. § 9604(c)(9)); assuring access to the facility and any adjacent

property including the securing of any right-of-way or easement needed to effectuate a remedial action; and assuring that the State will satisfy all federal, State, and local requirements for permits and approvals necessary to effectuate a remedial action.

(c) Each contract entered into by the Department under this section shall stipulate that all obligations of the State are subject to the availability of funds. Neither this section nor any contract entered into under authority of this section shall be construed to obligate the General Assembly to make any appropriation to implement this Part or any contract entered into under this section. The Department shall implement this Part and any contract entered into under this section from funds otherwise available or appropriated to the Department for such purpose. (1989, c. 286, s. 10; 1989 (Reg. Sess., 1990), c. 1004, s. 11; c. 1024, s. 30(c).)

§ 130A-310.23. Filing notices of CERCLA/SARA (Superfund) liens.

Notices of liens and certificates of notices affecting liens for obligations payable to the United States under CERCLA/SARA (Superfund) (42 U.S.C. § 9607(1)) shall be filed in accordance with Article 11A of Chapter 44 of the General Statutes. (1989 (Reg. Sess., 1990), c. 1047, s. 1.1; 1991 (Reg. Sess., 1992), c. 890, s. 11.)

ARTICLE 10.

North Carolina Drinking Water Act.

§ 130A-311. Short title.

This Article shall be cited as the "North Carolina Drinking Water Act." (1979, c. 788, s. 1; 1983, c. 891, s. 2.)

CASE NOTES

Cited in *In re Environmental Mgt. Comm'n*, 80 N.C. App. 1, 341 S.E.2d 588 (1986).

§ 130A-312. Purpose.

The purpose of this Article is to regulate water systems within the State which supply drinking water that may affect the public health. (1979, c. 788, s. 1; 1983, c. 891, s. 2.)

CASE NOTES

Cited in *In re Environmental Mgt. Comm'n*, 80 N.C. App. 1, 341 S.E.2d 588 (1986).

§ 130A-313. Definitions.

The following definitions shall apply throughout this Article:
(1) "Administrator" means the Administrator of the United

ATTACHMENT B

Sites Deferred to the State of North Carolina

Site Name
City, County

EPA ID #

ATTACHMENT C

Model Schedule of Deferral Activities

<u>Activity</u>	<u>Duration</u>	<u>Time Line (from Day 1)</u>
Prepare and Mail Draft AOC Notify EPA and submit draft schedule	14 days	1 - 14
Negotiate AOC	180 days	15 - 195
Public Notice (14 day notice of public availability session and intent to enter into an AOC)	14 days	196 - 210
Public Availability Session (Release Draft AOC and begin 30-day public comment period)	30 days	211 - 241
Respond to comments, revise AOC as needed and provide documentation of community acceptance to EPA	30 days	242 - 272
Propose Deferral to EPA	7 days	273 - 280
EPA approval of Deferral	30 days	281 - 311
PRP and State Sign AOC	7 days	312 - 319
PRP Submits proposed RI Workplan (60 days from effective date of AOC)	60 days	320 - 380
Establish Information Repository (while awaiting RI Workplan)	14 days	(320- 334)
Review and comment on RI Workplan	30 days	381 - 421
PRP response to deficiencies	30 days	422 - 452
Review and comment on revised RI Workplan	30 days	453 - 483

ATTACHMENT C

Model Schedule of Deferral Activities

<u>Activity</u>	<u>Duration</u>	<u>Time Line (from Day 1)</u>
Prepare RI Workplan Fact Sheet (during workplan review)	14 days	(465- 479)
Post 14-day notice of public meeting and provide Draft RI Workplan to repository	14 days	484 - 498
Public Meeting	1 day	499
30-day public comment period and response to comments	30 days	500 - 530
PRP revises RI Workplan	14 days	531 - 545
State review and approval of Final RI Workplan	14 days	546 - 560
RI Field Work (begin within 30 days of State approval)	30 days	561 - 591
State establishes preliminary cleanup standards (ARARs and soil screening levels) during RI	14 days	(622 - 636)
PRP submits RI Report	120 days	592 - 712
Review RI Report and submit notice of deficiencies to PRP	30 days	713 - 743
PRP response to deficiencies	30 days	744 - 774
State Review and approval of RI	30 days	775 - 805
PRP submits proposed Remedial Action Plan (within 90 days of RI approval) including remedial alternatives	90 days	806 - 896

ATTACHMENT C

Model Schedule of Deferral Activities

<u>Activity</u>	<u>Duration</u>	<u>Time Line (from Day 1)</u>
Review proposed RA Plan and submit notice of deficiencies to PRP (State establishes final cleanup levels)	30 days	897 - 927
PRP addresses deficiencies	30 days	928 - 958
Review revised RA Plan	30 days	959 - 989
Prepare RA Plan Fact Sheet (during RA plan review)	14 days	(960 - 974)
Post 14-day notice of public meeting and provide draft RA Plan to repository	14 days	990 - 1004
Public meeting	1 days	1005
30-day public comment period	30 days	1006-1036
PRP responds to comments and revises RA Plan	30 days	1037-1067
State review and approval of revised RA Plan	14 days	1068-1082
Begin RA (within 60 days of State approval of RA Plan)	60 days	1083-1143
PRP shall submit weekly and quarterly reports as required in AOC (throughout implementation of remedial action)	—days	
Review reports and submit notice of deficiencies to PRP	14 days	
PRP addresses reporting deficiencies	14 days	

ATTACHMENT C

Model Schedule of Deferral Activities

<u>Activity</u>	<u>Duration</u>	<u>Time Line (from Day 1)</u>
PRP completes RA (duration of RA estimated, not limited)	180 days	1144-1324
PRP submits final report certifying completion of RA (within 30 days of RA completion)	30 days	1325-1355
Review final report and submit notice of deficiencies to PRP	30 days	1356-1386
PRP addresses reporting deficiencies	30 days	1387-1417
State review and approval of final completion report	14 days	1418-1432
State certifies completion of RA in writing to EPA	7 days	1433-1439
EPA confirms certification or initiates inquiry to validate the certification in writing to State	120 days	1440-1559
EPA records deferral completion status in CERCLIS and site is removed from CERCLIS	7 days	1560-1566



Southern Wood Piedmont Company

January 28, 1999

RECEIVED

JAN 29 1999

SUPERFUND SECTION

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

Re: Signed AOC
Southern Wood Piedmont Site
Wilmington, New Hanover County, NC
USEPA ID Number NCD058517467

Dear Mr. Parker:

The Administrative Order on Consent Pursuant to NCGS 130A-310.9(b) and Superfund State Deferral Memorandum of Agreement is enclosed. The document has been signed by Jeff Rosbach, President of Southern Wood Piedmont Company.

As we discussed, the language in the AOC's section III. A. has been revised to state more accurately the current ownership of the property.

Please contact me at 864-99-1070, extension 103 if you have any questions or comments.

Sincerely,

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

CC: M. D. Pruett w/o
J. P. Rosbach w/o

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
SUPERFUND SECTION

IN RE: SOUTHERN WOOD PIEDMONT CO.
NCD 058 517 467
WILMINGTON, NORTH CAROLINA
NEW HANOVER COUNTY

ADMINISTRATIVE ORDER
ON CONSENT PURSUANT TO
N.C.G.S. 130A-310.9(b) AND
SUPERFUND STATE DEFERRAL
MEMORANDUM OF
AGREEMENT

DOCKET NUMBER 97-SF-117

The following constitutes the agreement of the parties hereto. This Administrative Order on Consent (Consent Order) is entered into pursuant to the Superfund State Deferral Memorandum of Agreement between the US EPA Region IV (EPA) and the State of North Carolina. Southern Wood Piedmont Company concurs with the conclusions of law contained herein solely for purposes of this Consent Order.

I. JURISDICTION

This Consent Order is entered into under authority vested in the Secretary of the North Carolina Department of Environment and Natural Resources (Department) by North Carolina's Inactive Hazardous Sites Response Act of 1987 (the Act), which constitutes Part 3, Article 9 of Chapter 130A of the North Carolina General Statutes (N.C.G.S.). N.C.G.S. 130A-310 *et seq.* The Secretary of the Department has delegated this authority to the Director of the North Carolina Division of Waste Management (Director).

II. STATEMENT OF PURPOSE

This Consent Order is entered into for the purpose of addressing the hazardous substance or waste disposal site (the Site) defined in Section III. A. of this Consent Order, which the Department has determined endangers public health or the environment. In entering into this Consent Order, the objective of the Division of Waste Management (Division) and Southern Wood Piedmont Company is for Southern Wood Piedmont Company to implement a voluntary remedial action program approved by the Division involving: (1) preparation of a Remedial Investigation Plan to evaluate the extent of contamination related to wood preserving operations conducted on the Site, whether comingled with other contaminants or not; (2) implementation of the Remedial Investigation Plan; (3) completion of a Remedial Action Plan to evaluate alternatives for meeting cleanup standards; and (4) implementation of the approved Remedial Action Plan.

III. STIPULATIONS OF FACT

- A. "The Site" consists of ~~two~~^{PPK} contiguous properties, currently owned by the ~~City of~~^{PPK} Wilmington and the State Ports Authority, respectively, located on Greenfield Street, Wilmington, New Hanover County, North Carolina, and any additional area which has become contaminated as a result of hazardous substances or waste disposed at that property.
- B. Southern Wood Piedmont Company or a predecessor company conducted wood treating operations at the Site from 1932 through 1983. Those operations included the use and application of creosote, pentachlorophenol, and chromated copper arsenate.
- C. Surface soil sampling at the Site has revealed the presence of polynuclear aromatic hydrocarbons, arsenic, and dioxins.
- D. Groundwater sampling at the Site has revealed the presence of volatile organics and polynuclear aromatic hydrocarbons in the groundwater, plus non-aqueous phase liquid creosote product in the subsurface.
- E. Sediment sampling in the site's drainage ditch, and downgradient along Greenfield Creek, has revealed the presence of polynuclear aromatic hydrocarbons characteristic of creosote.

IV. CONCLUSIONS OF LAW

- A. The substances identified in Sections III. C., D. and E. above are hazardous substances as defined in the Comprehensive Environmental Response, Compensation and Liability Act/Superfund Amendments and Reauthorization Act, 42 U.S.C. Section 9601 *et seq.*, and are thus such substances for purposes of the Act pursuant to N.C.G.S. 130A-310(2).
- B. Disposal of hazardous substances referred to in the preceding paragraph has occurred at the Site within the meaning of N.C.G.S. 130A-310(3) pursuant to N.C.G.S. 130A-290(a)(6).
- C. The Site is an inactive hazardous substance or waste disposal site for purposes of the Act pursuant to N.C.G.S. 130A-310(3).
- D. Southern Wood Piedmont Company is an owner, operator, or other responsible party in relation to the Site within the meaning of N.C.G.S. 130A-310.9, pursuant to N.C.G.S. 130A-310(4), -310(5), -310(9), and -310.7.

- E. This Consent Order is authorized pursuant to the power of the Secretary under N.C.G.S. 130A-310.9(b), and by delegation the Director, to enter into agreements with owners, operators, or other responsible parties for implementation of voluntary remedial action programs as to inactive hazardous substance or waste disposal sites in accordance with remedial action plans approved by the Department.

V. REIMBURSEMENT OF COSTS

- A. As evidenced by Attachment A hereto, Southern Wood Piedmont Company has paid, or agreed to repay, EPA \$619,069.84 in past federal response costs which EPA determines are owed in relation to the Site. Those costs shall include, but may not be limited to, the costs of activities conducted by the Division and funded under federal Superfund cooperative agreements.
- B. Southern Wood Piedmont Company shall reimburse the Division for all federally funded oversight and enforcement costs the Division incurs pursuant to this Consent Order. The Division will mail Southern Wood Piedmont Company quarterly cost summaries and invoices for these costs. The cost summaries will be of the type provided by the Division to EPA as part of the documentation which the Division provides to EPA for cost recovery purposes. Within sixty (60) days of receiving each invoice, Southern Wood Piedmont Company shall submit full payment to the Division. Payment shall be by certified or cashier's check payable to "NC DENR".

VI. WORK TO BE PERFORMED

All work performed pursuant to plans approved under this Consent Order shall be under the direction and supervision of a professional engineer or a licensed geologist with expertise in hazardous substance site cleanup and comply with the current U.S. Environmental Protection Agency (EPA) Region IV, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996.

- A. Within thirty (30) days after the execution of this Consent Order, Southern Wood Piedmont Company shall submit to the Division four (4) copies of a Remedial Investigation Report organized in sections corresponding to and including at least the items listed below in Sections VI. D. and G.
- B. Within thirty (30) days of receiving notice from the Division of any deficiency in the Remedial Investigation Report, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to correct such deficiency. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's

ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. When the Division determines that the Remedial Investigation is complete, the Division will notify Southern Wood Piedmont Company in writing.

- C. Should additional remedial investigation work phases be necessary, Southern Wood Piedmont Company shall submit the subsequent work phase investigation plan within thirty (30) days of receiving notice from the Division of the additional work phase required. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. The requirements for the submittal and content of plans and reports under Sections VI. D., E., F., G., and H. shall apply to subsequent work plans and reports except where, in the Division's sole discretion, the submission of such would duplicate a previous submittal.
- D. Within thirty (30) days of receiving notice from the Division of the additional work phase required, Southern Wood Piedmont Company shall submit to the Division four (4) copies of a Supplemental Remedial Investigation Plan (Investigation Plan) organized in sections corresponding to the following items and including at least:
1. Site location information including site street address, longitude and latitude, and site and surrounding property land use.
 2. A summary of all management practices employed at the site for hazardous wastes and any wastes managed on site that may have contained hazardous substances, including a list of types and amounts of waste generated (with RCRA waste codes), treatment and storage methods, and ultimate disposition of wastes; a description of the facility's past and current RCRA status; the location and condition of any vessels currently or previously used to store any chemical products, hazardous substances or wastes; and a summary of the nature of all on-site hazardous substance releases, including one-time disposals or spills.
 3. United States Geological Survey topographic maps sufficient to display topography within a one-mile radius of the site.
 4. A site survey plat (prepared and certified by a Registered Land Surveyor) including scale; benchmarks; north arrow; locations of property boundaries, buildings, structures, all perennial and non-perennial surface water features, drainage ditches, dense vegetation, known and suspected spill or disposal areas, underground utilities, storage vessels, existing on-site wells; and identification of all adjacent property owners and land usage.

5. A description of local geologic and hydrogeologic conditions.
6. Inventory and map of all wells, springs, and surface-water intakes used as sources of potable water within a one-half mile radius of the center of the site. If the site is greater than one hundred (100) acres in size, the inventory and map must cover a one-mile radius from the center of each source area.
7. Identification of environmentally sensitive areas on and adjacent to the Site including:
 - Marine Sanctuaries
 - National and State Parks
 - Designated and proposed Federal and State Wilderness and Natural Areas
 - Areas identified under the Coastal Zone Management Act
 - Sensitive areas identified under the National Estuary Program or the Near Coastal Waters Program
 - Critical areas identified under the Clean Lakes Program
 - National Monuments
 - National and State Historical Sites
 - National and State Seashore, Lakeshore, and River Recreational Areas
 - Critical habitats and habitats known to be used by State or Federally designated or proposed endangered or threatened species or species under review as to their endangered or threatened status
 - National and State Preserves and Forests
 - National and State Wildlife Refuges
 - Coastal Barriers and Units of a Coastal Barrier Resources System
 - Federal land designated for protection of natural ecosystems
 - Spawning areas critical for the maintenance of fish/shellfish species within river, lake or coastal tidal waters
 - Migratory pathways and feeding areas critical for maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which such fish spend extended periods of time
 - Terrestrial areas utilized for breeding by large or dense aggregations of animals
 - Rivers State or Federally designated Scenic or Wild
 - State lands designated for wildlife or game management
 - Areas important to maintenance of unique biotic communities
 - State-designated areas for protection or maintenance of aquatic life
 - Wetlands
8. A copy of the current owner's(s) deed(s) to the property.
9. A chronological listing of all previous owners and each period of ownership since the property was originally developed from pristine land.
10. Operational history with aerial photographs and Sanborne Fire Insurance maps to support land-use history.
11. A list of all hazardous substances which have been used or stored at the site,

and approximate amounts and dates of use or storage as revealed by available written documentation and interviews with a representative number of former and current employees or occupants possessing relevant information.

12. Site environmental permit history, including copies of all federal, state, and local environmental permits, past and present, issued to Southern Wood Piedmont Company or within Southern Wood Piedmont Company custody or control.
13. A summary of all previous and ongoing environmental investigations and environmental regulatory involvement with the site, and copies of all associated reports and laboratory data.
14. Proposed procedures for characterizing site geologic and hydrogeologic conditions and identifying and delineating each contamination source as to each affected environmental medium, including any plan for special assessment such as a geophysical survey.
15. Proposed methods, locations, depths of, and justification for, all sample collection points for all media sampled, including monitoring well locations and anticipated screened intervals.
16. Proposed field and laboratory procedures for quality assurance/quality control.
17. Proposed analytical parameters and analytical methods for all samples.
18. A contact name, address and telephone number for the principal consultant and laboratory, and qualifications and certifications of all consultants, laboratories and contractors expected to perform work in relation to this work plan. Any laboratory retained must currently be either certified to analyze applicable certifiable parameters under Title 15A of the North Carolina Administrative Code, Subchapter 2H, Section .0800, or be a contract laboratory under the EPA Contract Laboratory Program.
19. Equipment and personnel decontamination procedures.
20. A health and safety plan that conforms to OSHA requirements and assures that the health and safety of nearby residential and business communities will not be adversely affected by activities related to the remedial investigation.
21. A proposed schedule for site activities and reporting.

22. Any other information required by the Division or considered relevant by the remediating party.

23. If this document includes any work that would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If this document includes any work that would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.

E. Within thirty (30) days of receiving notice from the Division of any deficiency in the Investigation Plan, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to correct such deficiency. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order.

F. When the Division determines that the Investigation Plan is complete, the Division will notify Southern Wood Piedmont Company in writing. Southern Wood Piedmont Company shall begin the Supplemental Remedial Investigation no sooner than receiving written approval of the Investigation Plan from the Division, nor later than thirty (30) days thereafter.

G. Within one hundred twenty (120) days of receiving written approval of the Investigation Plan from the Division, Southern Wood Piedmont Company shall submit to the Division four (4) copies of a Supplemental Remedial Investigation Report documenting implementation of the approved Investigation Plan, organized in sections corresponding to the following items and including at least:

1. A narrative description of how the investigation was conducted, including a discussion of any variances from the approved work plan.
2. A description of groundwater monitoring well design and installation procedures, including drilling methods used, completed drilling logs, "as built" drawings of all monitoring wells, well construction techniques and materials, geologic logs, and copies of all well installation permits.
3. A map, drawn to scale, showing all soil, surface water and sediment sample locations and monitoring well locations in relation to known disposal areas or other sources of contamination. Monitoring wells must be surveyed to a known benchmark. Soil sample locations must be surveyed to a known benchmark or flagged with a secure marker until after the remedial action is completed. Monitoring well locations and elevations must be surveyed by a Registered Land Surveyor.
4. A description of all laboratory quality control and quality assurance

procedures followed during the remedial investigation.

5. A description of procedures used to manage drill cuttings, purge water and decontamination water.
6. A summary of site geologic conditions, including a description of soils and vadose zone characteristics.
7. A description of site hydrogeologic conditions (if groundwater assessment is determined to be necessary), including current uses of groundwater, notable aquifer characteristics, a water table elevation contour map with groundwater flow patterns depicted, tabulated groundwater elevation data, and a description of procedures for measuring water levels.
8. Tabulation of analytical results for all sampling (including sampling dates and soil sampling depths) and copies of all laboratory reports (including QA/QC support data referenced to specific samples).
9. Soil, groundwater, surface water and sediment contaminant delineation maps and cross sections, including scale and sampling points with contaminant concentrations.
10. A description of procedures and the results of any special assessments such as geophysical surveys, immunoassay testing (EPA SW-846 4000 series methods), soil gas surveys, or test pit excavations.
11. Copies of all field logs and notes, and color copies of site photographs.
12. Any other information required by the Division or considered relevant by the remediating party.
13. If this document includes any work that would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If this document includes any work that would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.

H. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. Within thirty (30) days of receiving notice from the Division of any deficiency in the Supplemental Remedial Investigation Report, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to correct such deficiency. When the Division determines that the Remedial Investigation is complete, the Division will notify Southern Wood Piedmont Company in writing.

I. Should additional remedial investigation work phases be necessary, Southern Wood Piedmont Company shall submit the subsequent work phase investigation plan within thirty (30) days of receiving notice from the Division of the additional work phase required. The requirements for the submittal and content of plans and reports under Sections VI. D., E., F. G., and H. shall apply to subsequent work plans and reports except where, in the Division's sole discretion, the submission of such would duplicate a previous submittal.

J. If the Division determines that hazardous substances or waste disposed at the Site have affected any drinking water wells, Southern Wood Piedmont Company shall, by a deadline established by the Division, provide an alternate drinking water source for users of those wells.

K. Following Southern Wood Piedmont Company's completion of the Remedial Investigation, the Division will ascertain cleanup standards for each contaminated medium at the Site. The Division shall meet with Southern Wood Piedmont to review the basis for cleanup standards, risk levels, remedial alternatives, design, end use of the site, and institutional controls. Southern Wood Piedmont Company shall use the Division's cleanup standards to develop remedial alternatives in the Remedial Action Plan, as described in Section VI. L. of this Consent Order.

L. Within ninety (90) days of receiving written notice from the Division that the Remedial Investigation is complete, Southern Wood Piedmont Company shall submit to the Division four (4) copies of its proposed Remedial Action Plan (Action Plan) for all contaminated media at the Site that exceed the cleanup standards ascertained by the Division, organized in sections corresponding to the following items and including at least:

1. A statement of objectives for the Remedial Action.
2. A listing of potentially applicable technologies.
3. An evaluation of remedial alternatives using the following feasibility study criteria:
 - a. Protection of human health and the environment, including attainment of remediation goals.
 - b. Compliance with applicable federal, State and local regulations.
 - c. Long-term effectiveness and permanence.
 - d. Reduction of toxicity, mobility and volume.
 - e. Short-term effectiveness: effectiveness at minimizing the impact of the site remediation on the environment and the local community.
 - f. Implementability: technical and logistical feasibility, including an estimate of time required for completion.
 - g. Cost.
 - h. Community acceptance.

4. A detailed description of Southern Wood Piedmont Company's preferred remedial alternative for each contaminated medium, from among the alternatives evaluated, including an evaluation of potential impact to any sensitive environments identified on or near the site and construction designs and specifications (any proposed treatment technology may require on-site testing or bench-scale testing of Site waste to verify its effectiveness).
5. A description of all activities that are necessary to ensure that the proposed method(s) of remedial action is (are) implemented in compliance with applicable laws and regulations and that cleanup goals established hereunder are met. These activities include, but are not limited to, well installation and abandonment, sampling, run-on/run-off control, and discharge of treated waste streams.
6. The results of any treatability studies and/or additional site characterization needed to support the remedy.
7. A description of methods of post-remedial and confirmatory sampling, and any necessary maintenance.
8. A health and safety plan that conforms to OSHA requirements and assures that the health and safety of nearby residential and business communities will not be adversely affected by activities related to the Remedial Action.
9. Equipment and personnel decontamination procedures.
10. A proposed schedule for completion of remedial design and for Remedial Action construction, implementation and periodic sampling and reporting.
11. If this document includes any work that would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If this document includes any work that would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.

M. Southern Wood Piedmont Company shall provide to the Division the number of additional copies of the proposed Action Plan determined by the Division to be required for distribution to the local health director, register of deeds, and each public library in the county where the Site is located, if requested by the Division. The Division shall also mail notice of the Action Plan to those who have requested notice that such plans have been developed, as provided in N.C.G.S. 130A-310.4(c)(2). The Division will not approve the Action Plan until at least thirty (30) days after public notice was provided.

N. Within thirty (30) days of receiving notice from the Division of any deficiency in the Action Plan, Southern Wood Piedmont Company shall submit to the Division

information or material sufficient to correct such deficiency.

- O. Southern Wood Piedmont Company shall begin implementation of the Action Plan no sooner than receiving written approval from the Division nor later than sixty (60) days thereafter.
- P. Any requests for modifications of the approved Action Plan must be submitted in writing to the Division, and may not be incorporated or implemented unless and until approved in writing by the Division.
- Q. Southern Wood Piedmont Company shall provide to the Division: weekly written or telephone progress reports each Friday during the soil and waste remedial action if less than one (1) month in duration; quarterly reports during groundwater remedial action, any soil and waste remedial action greater than one (1) month in duration, and any necessary post-remedial maintenance; and a final report with confirmatory sample data documenting complete implementation of the approved Action Plan. The quarterly reports and final report should include, without limitation, complete "as-built" drawings and specifications of all remedial action systems; tabulated laboratory data; the location and depth of samples collected; a description of all field and laboratory quality control/quality assurance procedures; and legible and complete copies of all records of periodic system inspections, laboratory reports, waste manifests and chain of custody documentation generated during the reporting period. Quarterly reports shall be provided by the tenth day after each quarter concludes, with the first quarter commencing on the date of written approval of the Action Plan by the Division.

The final report shall be provided within one (1) month following complete implementation of the approved Action Plan. The Division shall use best efforts to review this submission in a timely manner so that the Division's disapproval or authorization does not affect Southern Wood Piedmont's ability to meet any time schedule or deadline in connection with any of its obligations under this Consent Order. The report shall include a certification under oath by a corporate official of Southern Wood Piedmont Company in charge of a principal business function stating: "To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this certification is true, accurate and complete." If the document includes any work which would constitute the "practice of engineering" as defined by N.C.G.S. 89C, the signature and seal of a professional engineer must be included. If the document includes any work which would constitute the "public practice of geology" as defined by N.C.G.S. 89E, the signature and seal of a licensed geologist is required.

Within thirty (30) days of receiving notice from the Division of any deficiency in the reports required by this paragraph or in the implementation of the plans required by this Consent Order, Southern Wood Piedmont Company shall submit to the Division information or material sufficient to demonstrate correction of such deficiencies.

- R. When the Division determines that the following conditions apply, Southern Wood Piedmont Company shall submit, for the Division's approval, a survey plat for recordation which complies with N.C.G.S. 130A-310.8(a):

<u>Condition</u>	<u>Deadline for Submittal to Division</u>
(1) Remedial action or control of groundwater only is required.	Within thirty (30) days of receiving notice from the Division that the remedial investigation is complete.
(2) Remedial action or control of groundwater and another environmental medium is required.	Within thirty (30) days of receiving notice from the Division that non-groundwater remedial action is complete.
(3) Recordation is appropriate as part of the approved remedy.	Within thirty (30) days of receiving notice from the Division to submit such a plat.

- S. When the Division determines that implementation of the approved Action Plan and the final report is complete, the Division will notify Southern Wood Piedmont Company in writing. Thereafter, if Southern Wood Piedmont Company believes it has remediated the Site to current standards as provided in Part 5, Article 9 of Chapter 130A of the North Carolina General Statutes, it may submit a written request to the Division for such a determination, accompanied by the fee required by N.C.G.S. 130A-310.39(a)(2).

VII. SAMPLING, ACCESS, AND DATA/DOCUMENT AVAILABILITY

- A. The Division or its representatives may take split or duplicate samples of any samples collected by Southern Wood Piedmont Company pursuant to this Consent Order. Southern Wood Piedmont Company shall notify the Division not less than ten (10) days in advance of any sampling, assessment or remediation activities. This notification may be given verbally in the field by Southern Wood Piedmont Company to the Division.
- B. To the extent permitted by law, the Division or its representatives may conduct any field activity it deems appropriate in relation to the Site. Southern Wood Piedmont Company may take split or duplicate samples of any samples collected by the Division during such field activity.
- C. While this Consent Order is in effect, Division personnel and their representatives may, in addition to exercising any related legal rights, enter the Site without notice at all times and, while present: review the progress of activities required by this Consent Order; conduct such tests as the Division deems necessary; verify the data submitted to the Division by Southern Wood Piedmont Company; inspect and copy any and all records, files, photographs, operating logs, contracts, sampling and monitoring data,

and other documents relating in any way to this Consent Order; and otherwise assess Southern Wood Piedmont Company's compliance with this Consent Order. All parties with access to the Site pursuant to this paragraph shall comply with all approved health and safety plans and the current U.S. Environmental Protection Agency (EPA) Region IV, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May 1996.

- D. Unless a confidentiality claim covering information provided under this Consent Order is made pursuant to law and adequately substantiated when the information is submitted, such information may be made available to the public by the Division without further notice to Southern Wood Piedmont Company. Southern Wood Piedmont Company agrees that under no circumstances shall analytical data generated pursuant to this Consent Order be considered confidential.
- E. In any government enforcement action brought against Southern Wood Piedmont Company, Southern Wood Piedmont Company waives any objections to the admissibility into evidence (but not objections as to the weight) of the results of any analyses of sampling conducted by or for Southern Wood Piedmont Company at the Site or of other data gathered pursuant to this Consent Order.
- F. If Southern Wood Piedmont Company is unable by reasonable efforts to gain access to other property as necessary pursuant to this Consent Order, the Division shall assist Southern Wood Piedmont Company in obtaining access.

VIII. DELAY IN PERFORMANCE

As soon as Southern Wood Piedmont Company is aware of the potential for delay, it shall submit to the Division written documentation of the reasons for the delay and the efforts made by Southern Wood Piedmont Company to avoid the delay, as well as a time by which such work can be completed. The Division shall review the documentation and shall promptly approve the new schedule if good cause is shown. Good cause may include, but is not limited to, extraordinary weather, natural disasters and national emergencies. At a minimum, good cause does not include normal inclement weather, increases in the cost of work to be performed under this Consent Order, financial difficulty for Southern Wood Piedmont Company in performing such work, failure by Southern Wood Piedmont Company to satisfy its obligations under this Consent Order (whether evidenced by a notice of deficiency or not), the pendency of dispute resolution, acts or omissions of Southern Wood Piedmont Company's contractors or representatives not otherwise constituting good cause, and failure by Southern Wood Piedmont Company or its contractors or representatives to make complete and timely application for any required approval or permit. The burden of demonstrating good cause for delay, and that the delay proposed is warranted, is Southern Wood Piedmont Company's.

IX. DISPUTE RESOLUTION

If Southern Wood Piedmont Company wishes to dispute any decision of the Division made pursuant to this Consent Order and cannot resolve the matter through informal negotiations, it shall, within fourteen (14) days of being notified of such decision, submit to the Division a written statement of the grounds for its dispute and of the decision it advocates. Within a reasonable period following its receipt of such a written statement, the Division shall issue a written decision on the disputed matter. Within fourteen (14) days of receiving the Division's written decision on the dispute, the Division shall have received from Southern Wood Piedmont Company a written statement as to whether Southern Wood Piedmont Company shall abide by the decision. If the Division does not receive such a statement, or the statement is to the effect that Southern Wood Piedmont Company shall not abide by the decision on the dispute, this Consent Order shall be deemed dissolved. Termination of the deferral status of this Site shall also be grounds for dissolution of this Consent Order. In the event of dissolution of this Consent Order, the Division shall retain all its applicable enforcement rights against Southern Wood Piedmont Company and Southern Wood Piedmont Company shall retain all applicable defenses. Southern Wood Piedmont Company's invocation of dispute resolution shall not alone excuse noncompliance with this Consent Order or any requirement established pursuant thereto.

X. ADDITIONAL PROVISIONS

- A. All documents submitted by to the Division pursuant to this Consent Order shall be sent by certified mail, return receipt requested, by Federal Express or other equivalent overnight service, or hand delivered to:

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

The Division will direct all correspondence related to this Consent Order to:

William P. Arrants
Manager of Environmental Affairs/Regulatory Compliance
Southern Wood Piedmont Company
P.O. Box 5447
Spartanburg, South Carolina 29304

- B. This Consent Order shall be binding upon, and inure to the benefit of, Southern Wood Piedmont Company, its agents, successors and assigns. The signatory for Southern Wood Piedmont Company to this Consent Order certifies that he/she is authorized to execute and legally bind Southern Wood Piedmont Company as to this Consent Order.

C. Southern Wood Piedmont Company shall provide a copy of this Consent Order to each contractor or other person or entity retained to perform any work under this Consent Order within seven (7) days after the effective date of this Consent Order or the date of retaining their services, whichever is later. Southern Wood Piedmont Company shall condition any such contracts upon satisfactory compliance with this Consent Order. Notwithstanding the terms of any contract, Southern Wood Piedmont Company is responsible for compliance with this Consent Order and for ensuring that such contractors or other persons or entities comply with this Consent Order. Submittal by Southern Wood Piedmont Company of each document pursuant to this Consent Order shall constitute certification by the signatory and by Southern Wood Piedmont Company of the truth, accuracy and completeness of the information contained in that document.

D. Subject to the reservation of rights in Section X.E. of this Consent Order, upon payment of the amounts specified in Section V. (Reimbursement of Costs) and upon completion of the work specified in Section VI. (Work to Be Performed) of this Consent Order to the satisfaction of the Division, the Department covenants not to sue or take any other civil or administrative action against Southern Wood Piedmont Company for any and all civil liability for injunctive relief or reimbursement of response costs in relation to the Site.

E. The covenant not to sue set forth in Section X.D. above does not pertain to any matters other than those expressly specified in Section X.D. above. The Department reserves and the Consent Order is without prejudice to all rights against Southern Wood Piedmont Company with respect to all other matters, including but not limited to, the following:

- (1) claims based on a failure by Southern Wood Piedmont Company to meet a requirement of this Consent Order, including but not limited to Section V. (Reimbursement of Costs), Section VI. (Work to be Performed), Section VII. (Sampling, Access, and Data/Document Availability), and Section X. (Additional Provisions);
- (2) any liability resulting from past or future releases of hazardous substances, pollutants or contaminants, at or from the Site caused or contributed to by Southern Wood Piedmont Company, its successors, assignees, lessees or sublessees;
- (3) any liability resulting from exacerbation by Southern Wood Piedmont, its successors, assignees, lessees or sublessees, of contamination at the Site;
- (4) any liability relating to hazardous substances, pollutants or contaminants not present or existing on or under the Site as of the effective date of this Consent Order;
- (5) criminal liability;

- (6) liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessment incurred by the Department, to the extent permitted by law; and
- (7) liability for violations of local, State or federal law or regulations.

F. In the event the Division determines Southern Wood Piedmont Company is in violation of this Consent Order or requirements established pursuant thereto, the Division may: order Southern Wood Piedmont Company to remedy the violation(s) or temporarily or permanently halt implementation of this Consent Order; conduct part or all of the remediation itself, seek cost recovery; and/or take any other action within the Division's enforcement authority regarding inactive hazardous substance or waste disposal sites. In that event, Southern Wood Piedmont Company shall retain all applicable defenses. The dispute resolution procedure set forth in Section IX. above, in addition to applying to all other decisions made by the Division pursuant to this Consent Order, shall also apply to any determination by the Division that Southern Wood Piedmont is in violation of this Consent Order or requirements established pursuant thereto.

G. To protect the public health or the environment, the Division may order a temporary or permanent halt to implementation of this Consent Order, or order actions within its authority regarding inactive hazardous substance or waste disposal sites in addition to or other than those required hereunder.

H. All actions required pursuant to this Consent Order shall be in accordance with applicable local, state and federal laws and regulations, unless an exemption regarding particular state or local laws or regulations is specifically provided in this Consent Order now or later.

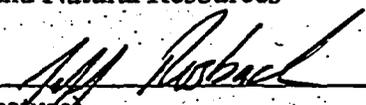
I. Southern Wood Piedmont Company agrees to indemnify and save and hold harmless the State of North Carolina, and its agencies, departments, officials, agents, employees, contractors and representatives, including without limitation the State Ports Authority, from any and all claims or causes of action arising from or on account of acts or omissions of Southern Wood Piedmont Company or its officers, employees, receivers, trustees, agents, or assigns in relation to the Site. The State of North Carolina shall give prompt, written notice to Southern Wood Piedmont Company of all such claims or causes of action. Except to the extent this Consent Order constitutes a contract, neither the State of North Carolina nor any agency or representative thereof shall be held to be a party to any contract involving Southern Wood Piedmont Company relating to the Site.

- J. Southern Wood Piedmont Company shall preserve, for at least six (6) years after termination of this Consent Order, all records and documents in its possession or in the possession of its divisions, employees, agents, accountants, contractors or attorneys which relate in any way to this Consent Order. After this six (6)-year period, Southern Wood Piedmont Company shall notify the Division at least thirty (30) days prior to the destruction of any such records and documents. Southern Wood Piedmont Company shall comply with any written request by the Division, prior to the day set for destruction, to continue to preserve such records and documents or to provide them to the Division. Southern Wood Piedmont Company may assert any available right to keep particular records and documents, other than analytical data, confidential.
- K. Except as otherwise provided herein, this Consent Order shall not constitute a satisfaction of, or release from, liability for any claim arising as a result of operation, ownership or use of the Site by Southern Wood Piedmont Company, its agents, contractors, lessees, successors or assigns.
- L. This Consent Order may not be modified without the written consent of the parties.
- M. Except for obligations under Section X. F., G. and J. above, this Consent Order shall terminate when Southern Wood Piedmont Company receives written notice from the Division that all activities required pursuant to this Consent Order have been completed to the Division's satisfaction.

This Consent Order is entered into on the _____ th day of _____ 1999.

William L. Meyer, Director
Division of Waste Management
North Carolina Department of Environment
and Natural Resources

By:


(Signature)

Jeff Rosbach, President
Name of Signatory, Title

Southern Wood Piedmont
Company

CERCLA SECTION 122(h) (1) AGREEMENT
FOR RECOVERY OF PAST RESPONSE COSTS

IN THE MATTER OF:) AGREEMENT FOR RECOVERY
) OF PAST RESPONSE COSTS
Southern Wood Piedmont Superfund Site))
Wilmington, New Hanover County))
North Carolina)) U.S. EPA Region 4
)) CERCLA Docket No.99-01-C
))
Southern Wood Piedmont Co.,and))
its parent company Rayonier, Inc.)) PROCEEDING UNDER SECTION
)) 122(h) (1) OF CERCLA
Settling Parties.)) 42 U.S.C. § 9622(h) (1)
))
_____))

CERCLA SECTION 122(h) (1) AGREEMENT
FOR RECOVERY OF PAST RESPONSE COSTS

TABLE OF CONTENTS

I.	<u>JURISDICTION</u>	1
II.	<u>BACKGROUND</u>	1
III.	<u>PARTIES BOUND</u>	2
IV.	<u>DEFINITIONS</u>	2
V.	<u>REIMBURSEMENT OF RESPONSE COSTS</u>	4
VI.	<u>FAILURE TO COMPLY WITH AGREEMENT</u>	4
VII.	<u>COVENANT NOT TO SUE BY EPA</u>	5
VIII.	<u>RESERVATIONS OF RIGHTS BY EPA</u>	5
IX.	<u>COVENANT NOT TO SUE BY SETTLING PARTIES</u>	6
X.	<u>EFFECT OF SETTLEMENT/CONTRIBUTION PROTECTION</u>	6
XI.	<u>RETENTION OF RECORDS</u>	7
XII.	<u>NOTICES AND SUBMISSIONS</u>	9
XIII.	<u>INTEGRATION:</u>	9
XIV.	<u>PUBLIC COMMENT</u>	10
XV.	<u>ATTORNEY GENERAL APPROVAL</u>	10
XVI.	<u>EFFECTIVE DATE</u>	10

CERCLA SECTION 122(h) (1) AGREEMENT
FOR RECOVERY OF PAST RESPONSE COSTS

IN THE MATTER OF:)
)
Southern Wood Piedmont Superfund Site))
)
Wilmington, New Hanover County) U.S. EPA Region 4
North Carolina) CERCLA Docket No.99-01-C
)
Southern Wood Piedmont Co. and)
its parent company, Rayonier, Inc.) PROCEEDING UNDER SECTION
) 122(h) (1) OF CERCLA-
Settling Parties.) 42 U.S.C. § 9622(h) (1)
)
)

I. JURISDICTION

1. This Agreement is entered into pursuant to the authority vested in the Administrator of the U.S. Environmental Protection Agency ("EPA") by Section 122(h) (1) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9622(h) (1), which authority has been delegated to the Regional Administrators of the EPA by EPA Delegation No. 14-14-D. This authority has been redelegated through the Director, Waste Management through the Associate Division Director for the Office of Superfund and Emergency Response to the Chief, Waste Programs Division.

2. This Agreement is made and entered into by EPA and the Southern Wood Piedmont Co. and its parent company Rayonier, Inc. ("Settling Parties"). The Settling Parties consent to and will not contest EPA's jurisdiction to enter into this Agreement or to implement or enforce its terms.

II. BACKGROUND

3. This Agreement concerns the Southern Wood Piedmont Superfund Site ("Site") located on Greenfield Street, Wilmington, New Hanover County, North Carolina. The Site is located in a light industrial area and was formerly a wood treatment and storage facility operated by the Settling Party. EPA alleges that the Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

4. During operation of the facility, the Settling Party, Southern Wood Piedmont Co. used creosote, pentachlorophenol and chromated copper arsenate in its wood treating processes at the Site. These identified substances are hazardous substances pursuant CERCLA, 42 U.S.C. Section 9601 et seq.

5. In response to the release or threatened release of hazardous substances at or from the Site, EPA undertook response actions at the Site pursuant to Section 104 of CERCLA, 42 U.S.C. § 9604. In January 1985, EPA conducted a Screening Site Investigation which included the collection of groundwater, subsurface soils in land farming areas, surface water, and biological tissue samples. The sample results indicated the presence of organic constituents of creosote and inorganics associated with chromated copper arsenate. Subsequently, EPA conducted an Expanded Site Investigation (ESI) to further determine the nature of the contaminants present at the Site; to confirm if a release occurred and the attribution of those contaminants to the Site; and to identify possible pathways by which contamination could migrate from the Site. During the ESI additional samples were taken including biological tissue and subsurface soil samples. These investigations were detailed in a Report dated July 16, 1997.

6. In performing this response action, EPA incurred response costs at or in connection with the Site.

7. EPA alleges that the Settling Parties are responsible parties pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is liable for response costs incurred at or in connection with the Site.

8. EPA and the Settling Parties desire to resolve Settling Parties' alleged civil liability for Past Response Costs without litigation and without the admission or adjudication of any issue of fact or law.

III. PARTIES BOUND

9. This Agreement shall be binding upon EPA and upon the Settling Parties and its successors and assigns. Any change in ownership or corporate or other legal status of the Settling Parties, including but not limited to, any transfer of assets or real or personal property, shall in no way alter the Settling Parties' responsibilities under this Agreement. Each signatory to this Agreement certifies that he or she is authorized to enter into the terms and conditions of this Agreement and to bind legally the party represented by him or her.

IV. DEFINITIONS

10. Unless otherwise expressly provided herein, terms used in this Agreement which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Agreement or in any appendix attached hereto, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601, et seq.

b. "Agreement" shall mean this Agreement and any attached appendices. In the event of conflict between this Agreement and any appendix, the Agreement shall control.

c. "Day" shall mean a calendar day. In computing any period of time under this Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

d. "EPA" shall mean the United States Environmental Protection Agency and any successor departments, agencies or instrumentalities of the United States.

e. "Interest" shall mean interest at the current rate specified for interest on investments of the Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a).

f. "Paragraph" shall mean a portion of this Agreement identified by an arabic numeral or a lower case letter.

g. "Parties" shall mean EPA and the Settling Parties.

h. "Past Response Costs" shall mean all costs, including but not limited to direct and indirect costs, that EPA has paid at or in connection with the Site through April 24, 1998, but do not include Interest accrued on all such costs through such date.

i. "Section" shall mean a portion of this Agreement identified by a roman numeral.

j. "Settling Parties" shall mean Southern Wood Piedmont Company and its parent company, Rayonier, Inc.

k. "Site" shall mean the Southern Wood Piedmont Superfund Site which consists of the areal extent of all groundwater, sediment, soil and surface water contamination emanating from that property. The Site property is located on Greenfield Street in Wilmington, New Hanover County, North Carolina, and encompasses approximately fifty two acres of land bordered by Amerada Hess Petroleum Terminal to the north, the Paktank Petroleum Terminal to the south, the Cape Fear River to the West and the Optimist Park and Front Street to the east. The Site consists of two contiguous properties; currently, thirty five acres in the northern and central portion of the Site are owned by the City of Wilmington and the remaining seventeen acres are owned by the North Carolina State Ports Authority.

1. "United States" shall mean the United States of America, including its departments, agencies and instrumentalities.

V. REIMBURSEMENT OF RESPONSE COSTS

11. Within 30 days of the effective date of this Agreement, the Settling Party shall pay to the EPA Hazardous Substance Superfund \$619,069.84, in reimbursement of Past Response Costs.

12. Payments shall be made by certified or cashier's check made payable to "EPA Hazardous Substance Superfund." Each check shall reference the name and address of the party making payment, the Site name, the EPA Region and Site/Spill ID Number 04-48, and the EPA docket number for this action, and shall be sent to:

U.S. EPA Region 4
 Attention: Superfund Accounting
 P.O. Box 100142
 Atlanta, Georgia 30384

13. At the time of payment, the Settling Parties shall send notice that such payment has been made to:

Paula Batchelor
 Cost Recovery Section
 61 Forsyth Street, SW
 Atlanta, Georgia 30365

VI. FAILURE TO COMPLY WITH AGREEMENT

14. In the event that any payment required by Paragraph 11 is not made when due, Interest shall continue to accrue on the unpaid balance through the date of payment.

15. If any amounts due to EPA under Paragraph 11 are not paid by the required date, Settling Parties shall pay to EPA, as a stipulated penalty, in addition to the Interest required by Paragraph 14, \$200.00 per day that such payment is late.

16. Stipulated penalties are due and payable within 30 days of the date of demand for payment of the penalties. All payments to EPA under this Paragraph shall be identified as "stipulated penalties" and shall be made in accordance with Paragraphs 12 and 13.

17. Penalties shall accrue as provided above regardless of whether EPA has notified the Settling Parties of the violation or made a demand for payment, but need only be paid upon demand. All penalties shall begin to accrue on the day after payment is

due, and shall continue to accrue through the day the U.S. EPA receives full payment.

18. In addition to the Interest and Stipulated Penalty payments required by this Section and any other remedies or sanctions available to EPA by virtue of Settling Parties' failure to comply with the requirements of this Agreement, if Settling Parties fail or refuse to comply with any term or condition of this Agreement it shall be subject to enforcement action pursuant to Section 122(h)(3) of CERCLA, 42 U.S.C. § 9622(h)(3). If the United States, on behalf of EPA, brings an action to enforce this Agreement, Settling Parties shall reimburse the United States for all costs of such action, including but not limited to costs of attorney time.

19. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive payment of any portion of the stipulated penalties that have accrued pursuant to this Agreement.

VII.. COVENANT NOT TO SUE BY EPA

20. Except as specifically provided in Paragraph 21 (Reservations of Rights by EPA), EPA covenants not to sue Settling Parties pursuant to Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), to recover Past Response Costs. This covenant shall take effect upon receipt by EPA of all amounts required by Section V (Reimbursement of Response Costs) and Section VI, Paragraphs 14 (Interest on Late Payments) and 15 (Stipulated Penalty for Late Payment). This covenant not to sue is conditioned upon the satisfactory performance by Settling Parties of its obligations under this Agreement. This covenant not to sue extends only to Settling Parties and does not extend to any other person.

VIII.. RESERVATIONS OF RIGHTS BY EPA

21. The covenant not to sue by EPA set forth in Paragraph 20 does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Agreement is without prejudice to, all rights against the Settling Parties with respect to all other matters, including but not limited to:

- a. liability for failure of Settling Parties to meet a requirement of this Agreement;
- b. liability for costs incurred or to be incurred by the United States that are not within the definition of Past Response Costs;
- c. liability for injunctive relief or administrative order enforcement under Section 106 of CERCLA, 42 U.S.C. § 9606;

d. criminal liability; and

e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments.

22. Nothing in this Agreement is intended to be nor shall it be construed as a release, covenant not to sue, or compromise of any claim or cause of action, administrative or judicial, civil or criminal, past or future, in law or in equity, which the United States may have against any person, firm, corporation or other entity not a signatory to this Agreement.

IX. COVENANT NOT TO SUE BY SETTLING PARTIES

23. The Settling Parties agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to Past Response Costs or this Agreement, including but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claims arising out of the response actions at the Site for which the Past Response Costs were incurred; and

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to Past Response Costs.

24. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. 300.700(d).

X. EFFECT OF SETTLEMENT/CONTRIBUTION PROTECTION

25. Nothing in this Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Agreement. EPA and the Settling Parties each reserve any and all rights (including, but not limited to, any right to contribution), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto.

26. EPA and the Settling Parties agree that the actions undertaken by Settling Parties in accordance with this Agreement do not constitute an admission of any liability by the Settling Party. The Settling Parties do not admit, and retain the right

to controvert in any subsequent proceedings other than proceedings to implement or enforce this Agreement, the validity of the facts or allegations contained in Section II of this Agreement.

27. The Parties agree that Settling Parties are entitled, as of the effective date of this Agreement, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for "matters addressed" in this Agreement. The "matters addressed" in this Agreement are Past Response Costs.

28. Settling Parties agree that with respect to any suit or claim for contribution brought by it for matters related to this Agreement, they will notify EPA in writing no later than 60 days prior to the initiation of such suit or claim. Settling Parties also agree that, with respect to any suit or claim for contribution brought against them for matters related to this Agreement, they will notify EPA in writing within 10 days of service of the complaint or claim upon them. In addition, Settling Parties shall notify EPA within 10 days of service or receipt of any Motion for Summary Judgment and within 10 days of receipt of any order from a court setting a case for trial, for matters related to this Agreement.

29. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other appropriate relief relating to the Site, Settling Parties shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised in the subsequent proceeding were or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant not to sue by EPA set forth in Paragraph 20.

XI. RETENTION OF RECORDS

30. Until six years after the effective date of this Agreement, each Settling Party shall preserve and retain all records and documents now in its possession or control, or which come into its possession or control, that relate in any manner to response actions taken at the Site or to the liability of any person for response actions conducted and to be conducted at the Site, regardless of any corporate retention policy to the contrary.

31. After the conclusion of the document retention period in the preceding paragraph, Settling Parties shall notify EPA at least 90 days prior to the destruction of any such records or

documents, and, upon request by EPA, Settling Parties shall deliver any such records or documents to EPA. Settling Parties may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Settling Parties assert such a privilege, they shall provide EPA with the following: 1) the title of the document, record, or information; 2) the date of the document, record, or information; 3) the name and title of the author of the document, record, or information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or information; and 6) the privilege asserted. However, no documents, reports, or other information created or generated pursuant to the requirements of this or any other judicial or administrative settlement with the United States shall be withheld on the grounds that they are privileged. If a claim of privilege applies only to a portion of a document, the document shall be provided to EPA in redacted form to mask the privileged information only. Settling Party shall retain all records and documents that they claim to be privileged until EPA has had a reasonable opportunity to dispute the privilege claim and any such dispute has been resolved in Settling Parties' favor.

32. By signing this Agreement, Settling Parties certify individually that, to the best of their knowledge and belief, it has:

a. not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to its potential liability regarding the Site, after notification of potential liability or the filing of a suit against the Settling Parties regarding the Site; and

b. fully complied with any and all EPA requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e)

33. By signing this Agreement, Settling Parties agree to provide EPA with any and all requested non-privilege information currently in its possession, or in the possession of its officers, directors, employees, contractors or agents, which relates in any way to the ownership, operation or control of the Site, or to the ownership, possession, generation, treatment, transportation, storage or disposal of a hazardous substance, pollutant or contaminant at or in connection with the Site available to EPA. Any assertions by Settling Parties that a document is privilege will be subject to the requirements in paragraph 31.

XII. NOTICES AND SUBMISSIONS

34. Whenever, under the terms of this Agreement, notice is

required to be given or a document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice of a change to the other Parties in writing. Written notice as specified herein shall constitute complete satisfaction of any written notice requirement of this Agreement with respect to EPA and Settling Parties.

As to EPA:

Marlene J. Tucker
Environmental Accountability Division
Office of Legal Support
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

Luis Flores
North Site Remedial Branch
North Carolina Section
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-8960

As to Settling Parties:

William H. Kitchens, Esq.
Arnall, Golden & Gregory, LLP
2800 One Atlantic Center
1201 W. Peachtree Street
Atlanta, Georgia 30309

Lisa Palumbo
Vice President & General Counsel
Rayonier Inc.
1177 Summer Street
Stamford, Connecticut 06904

XIII. INTEGRATION

35. This Agreement constitutes the final, complete and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Agreement. The Parties acknowledge that there are no representations, agreements or understandings relating to the settlement other than those expressly contained in this Agreement.

XIV. PUBLIC COMMENT

35. This Agreement shall be subject to a public comment period of not less than 30 days pursuant to Section 122(i) of CERCLA, 42 U.S.C. § 9622(i). In accordance with Section 122(i)(3) of CERCLA, EPA may modify or withdraw its consent to this Agreement if comments received disclose facts or

considerations which indicate that this Agreement is inappropriate, improper or inadequate.

XV. ATTORNEY GENERAL APPROVAL

36. The Attorney General or her designee has approved the settlement embodied in this Agreement in accordance with Section 122(h) (1) of CERCLA, 42 U.S.C. § 9622(h) (1).

XVI. EFFECTIVE DATE

37. The effective date of this Agreement shall be the date upon which EPA issues written notice that the public comment period pursuant to Paragraph 35 has closed and that comments received, if any, do not require modification of or EPA withdrawal from this Agreement.

IT IS SO AGREED:

U.S. Environmental Protection Agency

By:

Dance Ann Knight, CHMM
[Name]

for Chief, Programs Service Branch

12/31/98

Date

THE UNDERSIGNED SETTLING PARTY enters into this Agreement in the matter of SOUTHERN WOOD PIEDMONT SUPERFUND SITE., U.S. EPA Region 4. CERCLA Docket No. 99-01-C, located in Wilmington, New Hanover County, North Carolina:

FOR SETTLING PARTY: Southern Wood Piedmont

[Name]

P.O. Box 5447

[Address]

Spartanburg, SC

By:

[Signature]

[Name]

Dec 21, 1998

[Date]



PROPOSED DEFERRAL SITE FACT SHEET

Southern Wood Piedmont - Wilmington Site

Greenfield Street

Wilmington; New Hanover County, NC

February 1999

INTRODUCTION

This fact sheet describes a proposed process for environmental assessment and cleanup at the Southern Wood Piedmont Site in Wilmington, New Hanover County, N.C. The document includes: site description and history; a summary of previous investigations; a brief overview of the Superfund program and the state deferral process; community involvement activities and a list of contacts for additional site information; and a glossary of terms and acronyms commonly used in the Superfund program. Words highlighted in bold print within this fact sheet are defined in the glossary.

The NC Superfund Section is conducting a "kickoff" public meeting March 18, 1999 beginning at 6:00 p.m., at the New Hanover County Public Library, 210 Chestnut St., Wilmington, NC. The meeting is intended to provide information to help the public become more informed and involved in the future disposition and remediation of the site. An additional public information session will be held for the benefit of residents of the Nesbitt Courts housing complex at the complex annex room on March 19, 1999, from 10:00 a.m. to noon.

SITE DESCRIPTION

The Southern Wood Piedmont (SWP) Wilmington Site is located at the west end of Greenfield Street (west of Front Street) on the Cape Fear River waterfront, in Wilmington,

New Hanover County, NC (Figure 1). The site consists of 3 land parcels totaling 96 acres, plus additional area contaminated as a result of hazardous substance migration from the site. The NC State Ports Authority owns 93 acres of the site. The remaining 3 acres, in the southeast part of the site, are privately owned. The site is currently vacant.

The northern half of the site is open lawn, while the southern half is mostly wooded, containing wetlands and man-made drainage ditches. The property drains through a ditch to Greenfield Creek to the Cape Fear River tidal estuary (Figure 2). Lower elevations of the site tend to be flooded during highest tides or river floods. The only structures onsite are wooden cribbing at 2 slips at the Cape Fear waterfront. The NC Ports Authority proposes to develop the site as a future expansion of its existing facilities.

**FIGURE 1:
SOUTHERN WOOD PIEDMONT CO.
WILMINGTON, NC
NCD 058 517 467
SITE LOCATION PLAN**

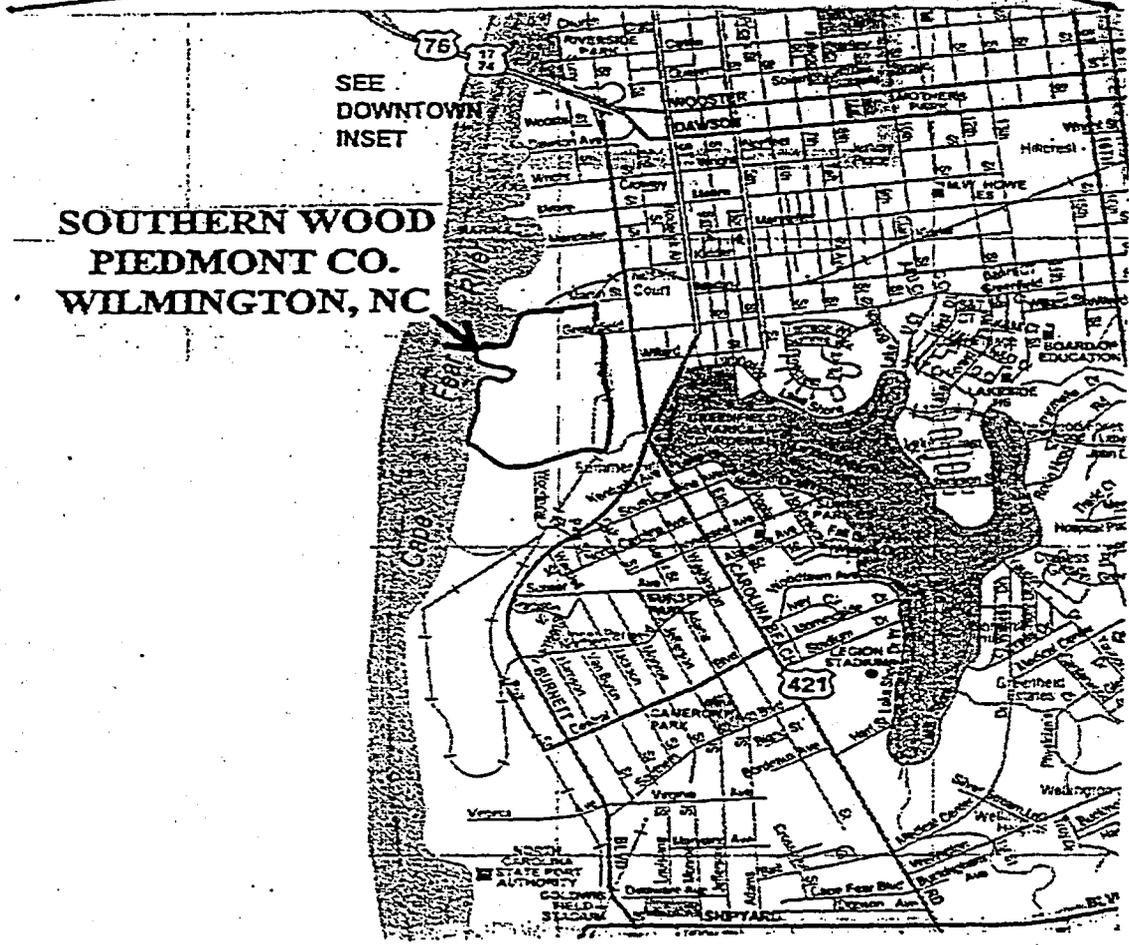
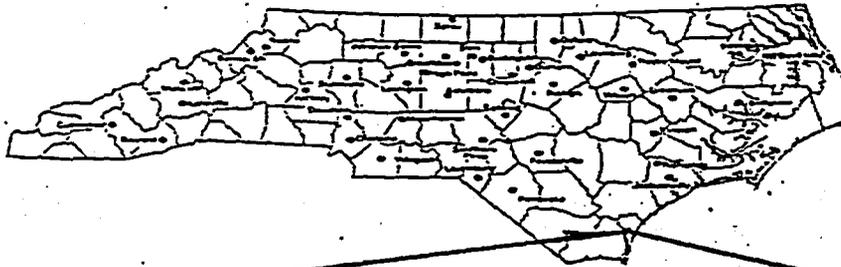
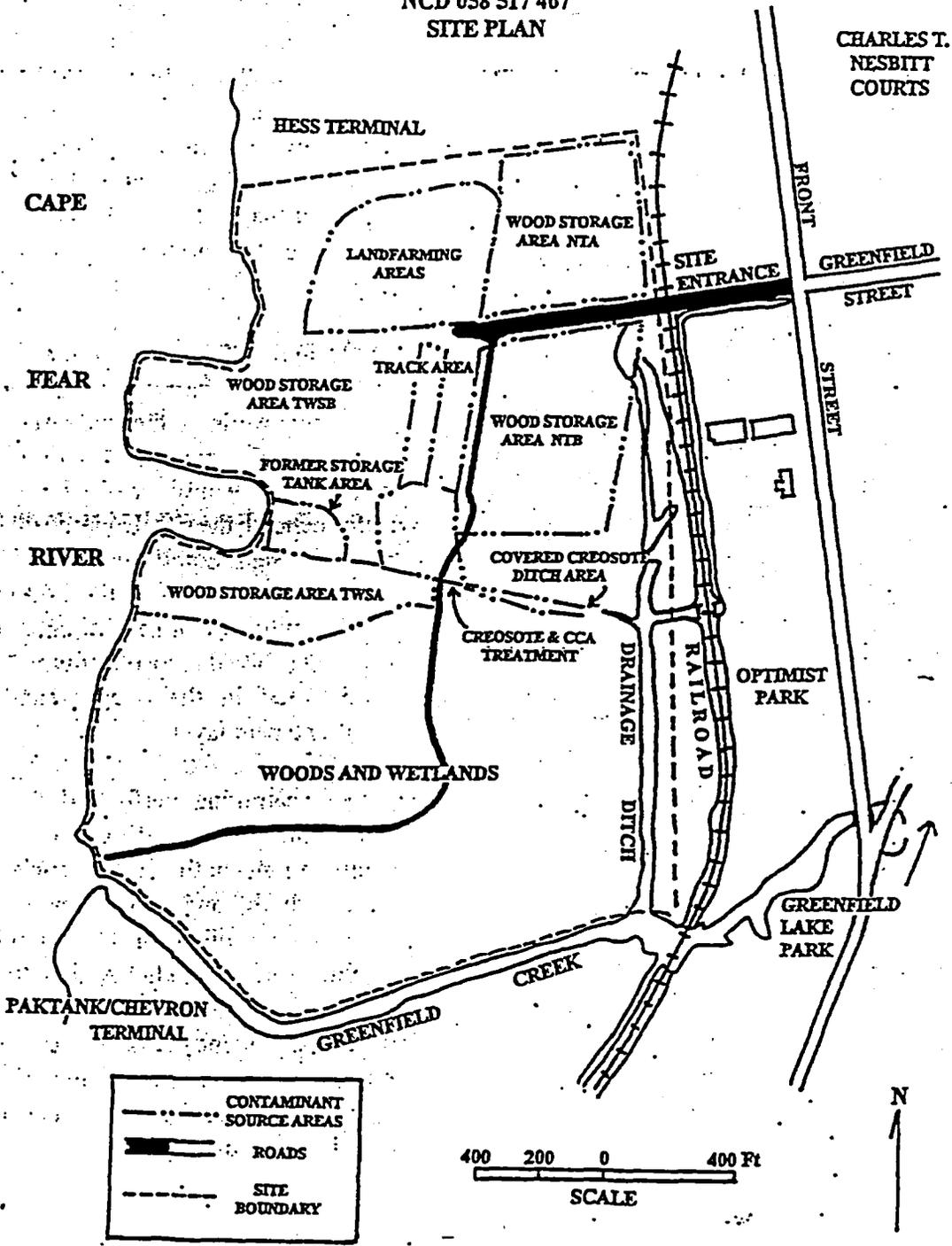


FIGURE 2:
SOUTHERN WOOD PIEDMONT CO.
WILMINGTON, NC.
NCD 058 517 467
SITE PLAN



The surrounding neighborhood is mixed industrial, commercial, and residential. Petroleum storage terminals border the site to the north and south.

An athletic field and commercial facilities are located southeast of the site along Front Street, and the Nesbitt Courts apartments are located east of the site on 2nd Street.

SITE HISTORY

The site was used to construct concrete barges during WWI. The North State Treating Company treated wood on-site from 1932 to 1935. From 1935 to 1969 Taylor Colquitt leased the portion of the site which was owned by the City of Wilmington. The facility was taken over by ITT in 1969. Southern Wood Piedmont was formed under ITT in 1971.

Creosote was the primary wood treating constituent historically used at the site. Chromated copper arsenate (CCA) was also used after 1972, and pentachlorophenol (PCP) was used beginning in 1980. Diesel fuel was also stored and used onsite. Wood-treating occurred primarily within the northern part of the site, where large amounts of treated and untreated lumber were stored outdoors. Creosote accumulated in an east-west drainage ditch for several years at the site (Figure 2).

In 1985, under an Administrative Order on Consent with the State, Southern Wood Piedmont (SWP) excavated surface and subsurface soils contaminated with creosote and CCA. Excavation occurred at the site's creosote drainage ditch and former production areas. Soils exceeding 5 parts per million arsenic were disposed at the CSX hazardous waste landfill, in Pinewood SC. Creosote-stained soils were redeposited into two

landfarming areas in the north part of the site.

PREVIOUS INVESTIGATIONS

During the 1980s and early 1990s, samples of landfarm soil and adjacent groundwater were collected by SWP contractors and tested for creosote components, including polynuclear aromatic hydrocarbons. Soil sampling results indicated that some of the creosote constituents in the landfarm soil had undergone biodegradation, but that other components had not. Sampling results did not indicate that the landfarming operation had caused any local groundwater contamination.

In 1992 and 1993, SWP contractors began installing and sampling groundwater monitoring wells at the site. According to their 1994 report, creosote contamination was found in the sandy shallow water-table aquifer beneath the site. Underneath the site's production areas, liquid creosote had collected on top of a peat layer at the bottom of the shallow aquifer, about 15 feet beneath the land surface. Dissolved creosote compounds were also detected in the deeper sand aquifer beneath the peat layer.

Sediment sampling performed for SWP in 1994 and 1996 detected creosote contamination, both in the site's existing drainage ditch, and downstream from the mouth of the ditch in Greenfield Creek. Sampling did not indicate that the creek's contamination had reached the Cape Fear River, though some creosote was found at the bottom western edge of the site where creosote sludge had been used as fill material along the waterfront.

SWP contractors collected on-site surface soil samples during the early 1990s and in 1996. The samples revealed residual creosote contamination in soils at the site. In addition, soil testing in 1990 and 1996 detected dioxins in soils at the landfarming areas at the site. No other areas of the site were tested for dioxin.

In 1995, the North Carolina Department of Environment and Natural Resources (NCDENR) Superfund Section completed a **Site Inspection Prioritization (SIP)** report, which summarized the site history and the results of prior investigations. Based on the available information, the site was determined to be a candidate for the federal Superfund **National Priorities List (NPL)**.

The US Environmental Protection Agency Region IV (EPA) completed an **Expanded Site Inspection (ESI)** at the site in July 1997. The EPA collected samples which confirmed that soil and groundwater beneath the property and sediment in Greenfield Creek were contaminated by wood-preserving chemicals. ESI sampling also detected dioxins in surface soils, both at the landfarm areas and at the site's former production/wood storage areas (Figure 2). The EPA collected fish samples from Greenfield Creek to be tested for creosote and CCA residues, but test results were inconclusive. None of the creekbed or fish samples were tested for dioxins.

In summary, investigations completed at SWP indicate that the site has historically released wood treating chemicals to groundwater beneath the site. Runoff and/or groundwater seepage have also contaminated Greenfield Creek, a reported fishery and wetland. The nature and extent of contamination qualifies the site as a candidate for the National Priorities List of contaminated sites.

THE SUPERFUND PROGRAM

The Superfund program is a federal cleanup program authorized under the **Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)** and the **Superfund Amendments and Reauthorization Act of 1986 (SARA)**. These acts provide the US Environmental Protection Agency (EPA) with the authority to investigate and clean up uncontrolled and unregulated hazardous waste sites. Initially, the **Site Assessment Process** documents that contamination at the site poses a likely hazard to human health or the environment. If the site meets the criteria for consideration as a "national priority" for cleanup, a **Remedial Investigation and Feasibility Study (RI/FS)** is conducted at the site. The RI/FS typically takes 18 to 24 months to complete, depending on the size of the site.

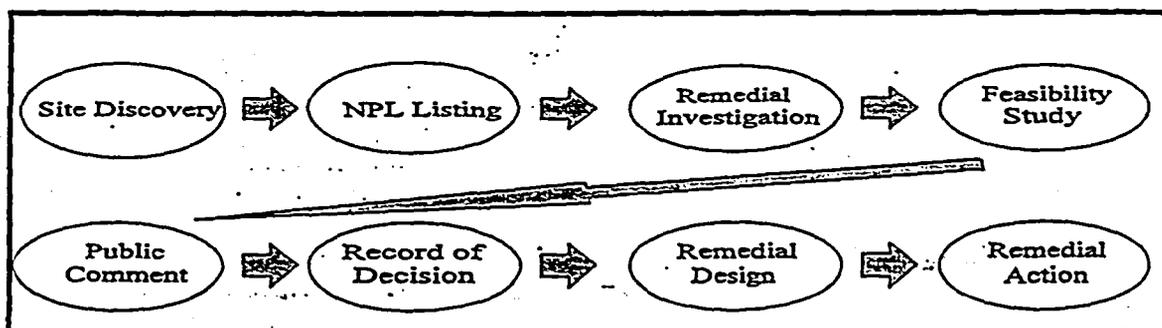


Figure 3. Superfund Process

The primary objective of an RI/FS is to characterize the nature and extent of the contamination at the site; to determine the relative risk to nearby human and environmental populations posed by a release of hazardous substances from the site; and to evaluate potential remedial options. Several possible remedies are compared based on the effectiveness to meet cleanup goals and cost. The chosen remedy is documented in a Record of Decision (ROD). The remedy selected in the ROD is applied to the site cleanup, and the design chosen is presented in the Remedial Design (RD).

Completion of the Remedial Design may take up to a year. The actual cleanup, referred to as the Remedial Action (RA), may take several years to complete or, in the case of groundwater remediation, several decades. Figure 3 presents an overview of the Superfund process.

STATE DEFERRAL

As an alternative to NPL listing and cleanup under the federal Superfund program, EPA may defer listing the site on the NPL while the state oversees remedial investigation and cleanup conducted by parties responsible for the contamination. This is referred to as a State Deferral. State Deferral is outlined in a Memorandum of Agreement between North

Carolina and the EPA. Under the deferral program, the potentially responsible parties sign an Administrative Order on Consent (AOC) agreement with the state to conduct remedial investigation and cleanup under state rather than federal oversight. The site is subject to both federal and state cleanup standards for protectiveness of human health and the environment. Cleanup standards applied at deferral sites must be at least as protective as those applied at NPL sites. Figure 4 presents an overview of the State Deferral process.

State Deferral may have certain advantages over listing a site on the NPL, and addressing it under the federal program.

The advantages of State Deferral are:

- * Initiate remedial investigation and cleanup more quickly.

Before the EPA can defer a site to the state, they must agree that the state can address the site at least as rapidly as the EPA. There is also a time savings in that the site does not have to undergo the NPL listing process.

- * Reduce costs, both to the public and potentially responsible parties, while maintaining the "polluter pays" concept.

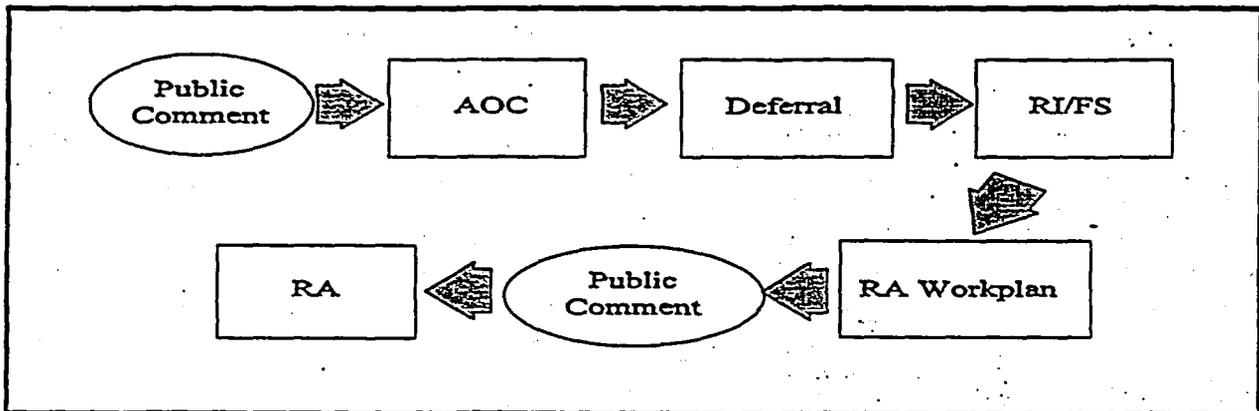


Figure 4. Deferral Process

Responsible parties agree to conduct and pay for the remedial investigation and cleanup of the site. They must also reimburse the state for oversight costs. Because the state will directly oversee the project, no oversight contractors are needed, thus reducing costs.

- * Allow state staff to directly oversee site activities.

State staff who are already familiar with the site's history will continue to oversee site activities directly. This will eliminate the need to bring new project managers up to speed. Also due to the proximity of state offices to the site, state staff will be able to spend more time at the site.

- * Improve community access to site information and State Project Manager.

Since state staff will be spending more time at the site, they will be more available to meet with community members and address any questions or concerns.

Before a site can be deferred to the state, the state must show that:

- * The responsible parties are willing to enter into an AOC with the state and conduct and pay for all necessary investigation and cleanup at the site, including state oversight costs, and past response costs.
- * The community surrounding the site and other affected parties support deferral of the site to the state.

The Southern Wood Piedmont Company (SWP) has signed a draft AOC, binding them to a schedule for investigation and cleanup of their Wilmington site. SWP has also agreed to reimburse the EPA for past site assessment

costs, to reimburse the State of NC for future oversight costs, and to finance the investigation and cleanup of the site.

The draft AOC is available for 30 days for public review and comment. In addition, the state solicits public comment regarding support for the State Deferral, and will address comments on the AOC and deferral. If there are no significant, valid, or unresolvable objections to the deferral, the state will then ask the EPA to defer the site to the state. If the EPA agrees, the site will be deferred and the state will sign the AOC with SWP to investigate and clean up the site.

COMMUNITY INVOLVEMENT

Community officials, civic leaders, residents and other interested parties are encouraged to learn more about the Southern Wood Piedmont site, the Federal Superfund program and the State Deferral program. The state also seeks community input on the site, the draft AOC and the decision to defer the site to the state rather than proceed with the federal Superfund process.

Both the City of Wilmington and the State Ports Authority have expressed their interest in expediting cleanup and redevelopment of the site. Currently, the State Ports Authority plans to redevelop the site to expand their warehouse facilities.

The NCDENR, Superfund Section has established an Information Repository, which will be maintained at:

The New Hanover County
Public Library, Reference Desk
210 Chestnut Street
Wilmington, North Carolina 28401
(910) 341-4390

Documents currently available at the repository are listed below. All site documents generated after the deferral will be added to the repository. A list of documents held by the repository will be updated and available at the New Hanover County Public Library Reference Desk.

Memorandum Of Agreement
Draft Administrative Order on Consent
Site Inspection Prioritization report
Expanded Site Inspection report
Fact Sheet - SWP Wilmington
Fact Sheet on Superfund
State Inactive Hazardous Sites Program
Guidance for Assessment and Cleanup

All documents in the local Information Repository, as well as all historical site file information about the SWP-Wilmington site, are available for public review and photocopying at the office of the NC Superfund Section in Raleigh, NC. Individuals wishing to review these file should contact:

Scott Ross, Public Information Assistant
Superfund Section
Division of Waste Management
NC DENR
401 Oberlin Road, Suite 150
Raleigh, NC 27605
Telephone: (919) 733-2801, ext. 328

Other information about EPA's involvement at the site can be obtained from:

Tamara Goosby
US EPA Region IV Records Center
Atlanta Federal Building
61 Forsyth Street, S.W., 11th Floor
Atlanta, GA 30303-3104
Telephone: (404) 562-8946

- The state will conduct a "kickoff" public meeting on March 18, 1999 at 6:00 p.m. The meeting will be held in the New

Hanover County Public Library's large meeting room, 210 Chestnut Street, Wilmington, N.C.

The purpose of the meeting is to inform the local community about environmental concerns at the Southern Wood Piedmont-Wilmington site, and discuss the Federal Superfund program and the State Deferral program. The state will solicit comments and questions from the public. The meeting will begin the 30-day public comment period on the draft AOC and the 30-day public comment period on the public's support of the deferral. Verbal and written comments will be accepted at the meeting and written comments will be accepted throughout the 30-day comment period ending April 17, 1999. All Written comments must be postmarked no later than April 17, 1999.

In addition, a two hour public information session will be held for the benefit of residents of the Charles T. Nesbitt Courts apartment complex. The session will be held for residents at 10:00 a.m. on Friday, March 19, 1999 in the annex meeting room of the complex.

- State Contact and Project Manager

Questions and comments about the site, the AOC or the deferral process should be directed to:

Stuart Parker, Hydrogeologist
NC Division of Waste Management
Superfund Section
401 Oberlin Road, Suite 150
Raleigh, NC 27605
Telephone: (919) 733-2801, ext. 277
Fax: (919) 733-4811
Email: parkersf@wastenot.enr.state.nc.us

US EPA Contact

Questions about the Federal Superfund program should be directed to:

Luis Flores
Remedial Project Manager
NC Site Management Section
US EPA Region IV
Waste Management Division
61 Forsyth Street S.W., 11th Floor
Atlanta, GA 30303-3104
Telephone: (404) 562-8807, or
(800) 435-9233

GLOSSARY

Administrative Order on Consent (AOC) - A voluntary agreement between the state and potentially responsible parties that outlines steps for completing remedial actions at contaminated sites.

Aquifer - A subsurface geologic formation which contains and transmits significant amounts of underground water.

Biodegrade - To break down into simpler chemical constituents, through biological processes.

Chromated copper arsenate (CCA) - A wood preserving compound consisting of copper, chromium, oxygen and arsenic, applied under pressure to impregnate and preserve lumber.

Creosote - A tarry, organic wood preserving compound, derived from distillation of coal tars and most commonly used to protect manufactured wood products such as telephone poles and railroad ties.

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) - A federal law passed in 1980 granting the EPA the authority to investigate and clean up uncontrolled and/or abandoned hazardous waste sites, using money obtained from the Superfund Trust Fund and/or legal action against parties responsible for the pollution.

Dioxins - A class of organic chemicals derived from chlorination of phenol-based organic compounds; a transformation product of PCBs, furans, and pentachlorophenol; considered highly toxic.

Expanded Site Inspection - The final stage of federally-funded site assessment, undertaken to identify potential NPL sites, using stringent sampling protocol and documentation.

Groundwater - Water which exists beneath the earth's surface and migrates through openings in soil and bedrock; often a principal drinking water source.

Groundwater Monitoring Well - A test well, generally of small diameter and specified depth, installed into an aquifer to measure and sample groundwater.

Hazardous Waste Landfill - An engineered, permitted facility, constructed to contain and secure hazardous waste chemicals, or material containing such chemicals, against human exposure or migration to groundwater or the environment.

Information Repository - A designated storage place, typically in a library or courthouse, in which the public can access file information pertaining to site investigation and cleanup.

Landfarming - A method of treating organic soil contaminants, in which affected soils are applied to the land surface, fertilized, and tilled to encourage natural biodegradation of contaminants by existing soil organisms.

Memorandum of Agreement - An agreement between EPA and the state granting authority to the state to conduct environmental investigation, and compel and oversee environmental remedial actions.

National Priorities List (NPL) - The EPA's list of top-priority hazardous waste sites eligible for Federally funded investigation and cleanup under the Superfund Program.

Pentachlorophenol - An organic wood preserving compound composed of (phenolic) carbon, chlorine and hydrogen, generally applied using diesel fuel as a carrier.

Polynuclear Aromatic Compounds - Large organic molecules (composed of 3 or more interconnected benzene ring structures) common in creosote. Several of these compounds are known or suspected to cause cancer.

Potentially Responsible Parties - A person or entity identified as a past or current owner or operator of a site where hazardous substances are known to have been released.

Record of Decision - Documentation of the selection of a preferred remedy for cleanup of a hazardous waste site, based on cost and effectiveness.

Remedial Action - The physical process of cleaning up a hazardous waste site.

Remedial Design - The design of the proposed remediation system used to clean up contamination which usually includes a treatability study.

Remedial Investigation/Feasibility Study - Post-assessment investigation of a hazardous waste site to determine the full nature and extent of contamination, the hazard posed to the human population and the environment, and the evaluation of various cleanup options for the site.

Site Assessment Process - The process of investigating, sampling, screening and prioritizing hazardous waste sites as candidates for inclusion on the EPA's National Priorities List.

Site Inspection Prioritization (SIP) - A Federally funded, pre-remedial environmental site assessment, undertaken to evaluate potential NPL-candidate sites by updating information and/or analytical data from previous site assessments, for use in the Hazard Ranking System.

State Deferral - An agreement under which EPA defers consideration of sites for NPL listing while states compel and oversee remedial actions conducted and funded by potentially responsible parties.

Superfund Amendment and Reauthorization Act of 1986 (SARA) - A federal law passed in 1986, reauthorizing the CERCLA process with new provisions, and modifications to existing provisions

Tidal Estuary - Portion of a coastal river influenced by ocean tides and containing mixed fresh and salt water. Often a major breeding place for fresh and salt water organisms.

Water Table Aquifer - A water-bearing geologic unit, frequently composed of soil and/or weathered rock, where groundwater exists in equilibrium with atmospheric pressure and is not confined by any overlying stratum of less permeable material.



Superfund Fact Sheet: Identifying Sites

Office of Emergency and Remedial Response
Hazardous Site Control Division (5203G)

Quick Reference Fact Sheet

The National Priorities List (NPL) and the Hazard Ranking System (HRS) are key elements in the U.S. Environmental Protection Agency's (EPA) Superfund program. The NPL is EPA's list of uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund. The HRS, by ranking the relative risks posed by different sites, helps EPA determine which sites should be placed on the NPL.

How does Superfund work?

The first step in the Superfund process is to identify abandoned or uncontrolled hazardous waste sites and take any immediate, short-term actions necessary under its Removal Program. EPA discovers these sites through a variety of methods, including reviewing records, reports, receipts, and letters provided by States, handlers of hazardous substances, and concerned citizens. EPA also learns about potential Superfund sites from concerned citizens who call the National Response Center's 24-hour hotline (1-800-424-8802).

Preliminary site information is incorporated into a national computerized database that contains information on potential hazardous waste sites as well as ongoing Superfund removal, remedial, and enforcement activities. This database, known as the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), contains information on more than 33,000 sites nationwide. Approximately 1,200 of these sites are on, or proposed for, the NPL.

Next, EPA or the State conducts a *preliminary assessment* to decide if the site poses a potential hazard. A preliminary assessment is a low-cost, off-site review of existing reports and documentation to determine whether a site threatens human health or the environment. It identifies hazardous substances at the site, and the populations and sensitive environments likely to be affected by their release.

Citizens may petition EPA to conduct a preliminary assessment for a particular site. The process of petitioning is described in the National Contingency Plan (NCP), the regulation which outlines how Superfund works.

If a preliminary assessment shows that a site does not present a potential hazard, no further action may be taken. But if the preliminary assessment reveals a contamination problem, EPA will perform a more extensive study called the *site inspection*.

In a typical site inspection, an EPA staff person collects information about the soil types, the streams or rivers flowing through or near the site, the area's population, weather, and the site's owner(s). Air, soil, and water samples from

nearby areas help EPA determine if hazardous substances have migrated from the site.

Since Superfund began, preliminary assessments have been completed at approximately 33,000 sites nationwide. At over 13,000 of these sites EPA has determined that no further action is needed. Site inspections have been completed at nearly 16,000 of the remaining sites.

After the preliminary assessment and site inspection, EPA can conduct an emergency *removal action* without any further wait. For a long-term *remedial action* to be conducted at a site, however, the site first must be placed on the National Priorities List (NPL).

What is the purpose of the National Priorities List (NPL)?

The NPL is a ranked inventory of the nation's most dangerous uncontrolled and abandoned hazardous waste sites. It was designed to support EPA's policy of cleaning up the worst sites first.

A site must be on the NPL to undergo remedial action paid for with Superfund monies. Remedial action may involve activities such as containment, treatment, and disposal of wastes so that site conditions no longer threaten human health and the environment. The NPL is one tool EPA uses to help set priorities for cleaning up Superfund remedial sites.

How do sites get on the NPL?

To be placed on the NPL, a site must have a Hazard Ranking System (HRS) score of at least 28.50, must be chosen as a State's top priority site, or must meet all three of these criteria:

- The Agency for Toxic Substances and Disease Registry (ATSDR) has issued a health advisory recommending that individuals be removed from the area where the release of hazardous substances occurred;
- EPA has determined that the site represents a significant threat to human health and the environment; and,
- EPA has determined that long-term remedial action is more cost-effective than short-term removal action.

To add sites to the NPL, EPA must publish a list of proposed sites in the *Federal Register*. The public then has 60 days to review the list and let EPA know if it agrees or disagrees with the HRS score and any other information used to propose a site. After considering relevant comments, all sites that still meet the criteria for listing are added to the NPL and published in the *Federal Register*. Currently about 1,200 sites are on or proposed for the NPL.

What does the HRS do?

The HRS evaluates the potential risks to human health and the environment posed by different sites. It is intended as a screening mechanism for determining which sites may need additional comprehensive study. The HRS does not determine if cleanup is possible or worthwhile, or the amount of cleanup needed.

Rather, it allows EPA to determine which sites should be placed on the NPL for remedial action.

- How does the HRS work?** Taking information from preliminary assessments and site inspections, EPA uses the HRS to rank hazardous waste sites according to their potential risks to human health and the environment. Individual sites are scored for a total of 0 to 100 points, based on three factors:
- Whether the site has released (or may release) contaminants into the environment;
 - The concentrations, toxicity, and quantity of waste on site; and
 - The people or sensitive environments affected by any release of hazardous waste.
- The HRS score gives EPA a measure of the likelihood that people or the environment will be harmed by hazardous substances either on site or leaving the site via air, soil, ground water, or surface water.
- Why are sites on the NPL presented in groups of 50?** EPA considers sites within each group of 50 to have approximately the same priority for cleanup.
- Why did EPA select 28.50 as the cutoff score for listing sites on the NPL?** EPA originally selected 28.50 as the cutoff HRS score because it produced an NPL of at least 400 sites, the minimum set by the law that established Superfund. The law set no upper limit on the size of the NPL. To be consistent, EPA has continued to add sites with scores of 28.50 or above. The cutoff was selected to meet legal requirements; sites scoring below the cutoff may present some risk. Sites scoring below 28.50 should be regarded as potentially dangerous and should be considered candidates for State- or local-funded cleanups.
- How often are sites added to the NPL?** The NPL must be updated at least once a year. EPA usually updates the NPL more frequently.
- If a site is on the NPL, will EPA pay for the cleanup?** Not necessarily. EPA, States, or *potentially responsible parties* (PRPs) will study the nature and extent of the problems at an NPL site before determining if it requires remedial action. Whenever possible, EPA attempts to have those responsible (i.e., PRPs) take remedial action. Superfund will pay only when those responsible cannot or will not fund the cleanup.
- Can EPA take action at sites proposed for, but not yet on, the NPL?** Yes. Removals can be undertaken before a site is placed on the NPL. EPA also may start the *Remedial Investigation/Feasibility Study* (RI/FS), which examines the type and extent of contamination at the site, identifies alternatives for remedial action, and performs technical and cost analyses for these alternatives. However, the remedy selected cannot be constructed or implemented until the site is finally on the NPL.

How does EPA determine funding priorities among sites?

For the most part, EPA funds cleanups at the most hazardous NPL sites first. Occasionally, other factors (such as whether a particular technology is available to clean up a site) will influence funding decisions.

Will sites on the NPL keep their priority for response actions after new sites are added?

Not necessarily. EPA's policy is to clean up the worst problems and the worst sites first, regardless of when a site is listed. Funds may be shifted from sites already undergoing cleanup to new sites if the new sites have more acute problems than do the active sites.

How long do remedial actions take?

The time required for a remedial action varies widely depending on the site. Remedial actions usually require many steps, including an RI/FS, and the design and construction or implementation of the selected remedy. Remedial actions usually involve long-term, expensive measures—for example, cleaning polluted ground water or dredging contaminated river bottoms. In these cases, it can take several years of complex engineering analysis and design work before the actual construction can begin.

EPA is developing the Superfund Accelerated Cleanup Model (SACM) to make hazardous waste cleanups more timely and efficient. This will be accomplished through more focus on the front end of the process and better integration of all Superfund program components. The approach involves:

- A continuous process for assessing site-specific conditions and the need for action.
- Cross-program coordination of response planning.
- Prompt risk reduction through early action (removal or remedial).
- Appropriate cleanup of long-term environmental problems.

SACM will operate within the existing statutory and regulatory structure. As SACM develops, there may be modification of certain policies noted in this fact sheet. However, overall priorities will remain the same: deal with the worst problems first; aggressively pursue enforcement opportunities; and involve the public in every phase of the process.



United States
Environmental Protection
Agency (5203G)
Washington, DC 20460

Official Business
Penalty for Private Use
\$300

First-Class Mail
Postage and Fees Paid
EPA
Permit No. G-35