



**Groundwater Closeout Sampling Event  
General Timber, Inc.  
Sanford, North Carolina  
EPA ID# NCD 057034449  
S&ME Project No. 1054-93-108**

**Prepared for:**

North Carolina Department of Environment and Natural Resources  
Division of Waste Management  
Hazardous Waste Section  
401 Oberlin Road  
Raleigh, North Carolina 27605

**Prepared by:**

S&ME, Inc.  
3118 Spring Forest Road  
Raleigh, NC 27616

April 6, 2000



# S&ME

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North Carolina Department of Environment and Natural Resources  
Division of Waste Management  
Hazardous Waste Section  
401 Oberlin Road  
Raleigh, North Carolina 27605

Attention: Mr. Mark Wilkins, Hydrogeologist

Reference: Groundwater Closeout Sampling Event  
General Timber, Inc.  
Sanford, North Carolina  
EPA ID# NCD 057034449  
S&ME Project No. 1054-93-108

Dear Mr. Wilkins:

On behalf of General Timber, Inc., S&ME, Inc. is submitting this letter to present our proposed plan for the Closeout Sampling Event for the groundwater monitor wells at SWMU 24 and SWMU 25 on General Timber's site near Sanford, North Carolina. This plan has been developed based on discussions at our recent meeting on March 27, 2000. The objective of this sampling event is to determine whether routine sampling of the monitor wells can be terminated.

In order to make its determination on future compliance sampling at the site, the Hazardous Waste Section (HWS) has requested that all existing monitor wells be sampled during, with the exception of a few for which there is sufficient justification for omission. After review of the monitor well and groundwater analytical data for the site, General Timber proposes that the following wells be sampled:

MW-9	MW-15	MW-24
MW-11	MW-16	P-1 (MW-2)
MW-12	MW-16D	P-4 (MW-18)
MW-13	MW-22	P-5
MW-14	MW-23	P-6

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As agreed at the meeting, monitor well MW-1 will not be sampled since it is upgradient and there is a considerable record of analytical results for this well. Also, monitor well P-2 (MW-17) will not be sampled since it is screened over the same depth interval as adjacent well MW-9. Finally, P-3 (MW-21) will not be sampled since its well casing was damaged several years ago and will no longer accommodate a bailer or pump for sampling.

The monitor wells will be sampled according to the following procedure. On the first day of the sampling event, static water elevations will be measured in the wells prior to any water being removed from the wells. The wells will then be re-developed to clear accumulated sediment and stagnant water from the well, since several of the wells have not been sampled in several years. This effort will focus particularly on those wells that have not been sampled recently. The development will be performed with decontaminated bailers or pumps. Water generated from the well development and purging will be collected and transported to the General Timber wood treatment facility for use as make-up water for the wood treatment process.

The wells will be allowed to recover overnight. On the second day of the sampling event, the wells will be purged by bailing until three well volumes have been removed or until the well is bailed to dryness. Measurements of temperature, pH, and specific conductivity will be made for each well volume removed. Samples for laboratory analysis will be collected in the following order: Volatile organic compounds (VOCs, where applicable), polynuclear aromatic hydrocarbon compounds (PAHs) and total phenols. After collection of these samples, the monitor wells will be allowed to recover again overnight.

On the third day of the sampling event, samples for inorganic analyses will be collected without further disturbance of the water in the well. These samples will be collected within 24 hours of purging the monitor wells. The samples for inorganic analysis will not be filtered.

Quality assurance samples will include the following:

- Two duplicate samples for PAHs, phenols, and inorganics
- One field blank for PAHs, phenols, and inorganics
- One trip blank for VOC samples

Summaries of the historical analytical results of the granular layer wells and the water table wells are shown on attached Tables 1 and 2, respectively. Samples from all monitor wells will be analyzed for PAH compounds by Method 8310 and for arsenic, chromium, and copper by SW-846 Method 6010. The method for PAHs has been selected because Paradigm, our laboratory, has indicated to us that this method has lower detection levels for PAHs than Method 8270. In addition, total phenols will be analyzed by Method 9065 for samples from wells MW-13, MW-16, MW-16D and MW-24, since phenols were recently reported for samples from these wells. No other reports of phenol

detections have previously occurred for any of the monitor wells at the site over numerous sampling events, so those wells will not be sampled for phenols. Also, samples will be collected for VOC analysis by Method 8240 from monitor wells MW-14 and MW-16 only, since acetone has been reported once or twice historically at these two wells. All confirmed detected compounds, regardless of the quantitation limits, will be reported.

All samples will be collected with clean, non-reactive gloves, decontaminated teflon bailers, and new nylon cord. Samples will be placed in pre-cleaned containers supplied by the laboratory. The water level probes and any other field equipment will be cleaned with phosphate-free soap and triple rinsed with deionized water between each use. All samples will be maintained under chain-of-custody procedures through delivery to the laboratory.

When the results of the laboratory analyses are received, they will be reviewed promptly. Any well with reported constituent levels exceeding the North Carolina 15A NCAC 2L standards will be immediately scheduled to be re-sampled for the appropriate analysis. Once received, the final laboratory results of this sampling event will be compiled into tabular form and submitted to the HWS, with a cover letter providing any details of the sampling event and any appropriate comments.

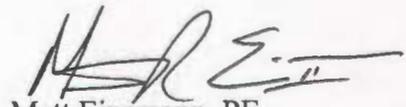
As we discussed, the quarterly compliance sampling event was scheduled for March. These samples have not been collected in anticipation of this sampling event. If you do not agree with this approach, please notify us so that the regular sampling event can be completed as soon as possible.

We hope this plan for the closeout sampling of the groundwater monitoring wells addresses any concerns that you might have and meets with your approval. General Timber wishes to proceed with this sampling event quickly, in the belief that the wells will justify the cessation of routine groundwater sampling at the site. We will schedule this event as soon as we have your approval of this plan. If you have any questions or if we can provide further detail, please contact us.

Sincerely,

**S&ME, Inc.**

  
Ernest F. Parker, Jr., PE  
Senior Environmental Consultant

  
Matt Einsmann, PE  
Senior Environmental Engineer

cc: Art Williams

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 3*

Analyte/Compound	Jan-86	Mar-86	Jul-86	Nov-86	Mar-87	May-87	Jun-87	Feb-88	May-88	Sep-88	Nov-91	Dec-91	Feb-92	
Arsenic	NM	---	NM	NM	NM	NM	NM	No						
Chromium	NM	---	NM	NM	NM	NM	NM	further						
Copper	NM	---	NM	NM	NM	NM	NM	sampling						
Lead	NM	---	NM	NM	NM	NM	NM							
Zinc	NM	---	NM	NM	NM	NM	NM							
Acetone	NM													
Volatile Organic Cmpds.	NM													
Phenols	NM	---	---	---										
Acenaphthene/Acenaphthylene	NM	NM	---	---	NM	---	NM	---	5 (J)	4 (J)	11	NM	NM	
Anthracene	NM	NM	---	---	NM	NM	NM	---	---	---	---	NM	NM	
Benzo(a)anthracene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	
Benzo(b)fluoranthene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	
Benzo(k)fluoranthene	NM	NM	---	---	NM	NM	NM	---	---	---	---	NM	NM	
Benzo(a)pyrene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	
Chrysene	---	NM	---	---	---	---	NM	---	1 (J)	---	---	---	---	
Fluoranthene	NM	NM	---	---	---	---	NM	---	4 (J)	2 (J)	---	---	---	
Fluorene	NM	NM	---	---	NM	NM	NM	---	1 (J)	3 (J)	---	NM	NM	
Indeno(1,2,3-cd)pyrene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	
Naphthalene	124	535	---	---	---	---	---	---	---	---	69	110	---	
Phenanthrene	NM	NM	---	---	NM	NM	NM	---	---	6 (J)	12	NM	NM	
Pyrene	NM	NM	---	---	NM	NM	NM	---	5 (J)	4 (J)	---	NM	NM	
Addnl. PAHs	NM	---	---	---	---	---	---							
pH	NM	NM	NM	6.5	6.5	6.1	6.1	5.7	NM	6	NM	NM	NM	
Spec. Conductivity (µS/cm)	NM	NM	NM	328	322	240	417	270	260	260	NM	NM	NM	

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 4*

Analyte/Compound	Jan-86	Mar-86	Jul-86	Nov-86	Mar-87	May-87	Jun-87	Feb-88	May-88	Sep-88	Feb-89	May-89	Aug-89	Nov-89	Feb-90
Arsenic	NM														
Chromium	NM														
Copper	NM														
Lead	NM														
Zinc	NM														
Acetone	NM														
Volatile Organic Cmpds.	NM														
Phenols	NM	---	---	---	---	---	---	NM	17						
Acenaphthene/Acenaphthylene	NM	NM	---	---	---	---	NM	---	21 (J)	4 (J)	---	---	---	---	---
Anthracene	NM	NM	---	---	NM	NM	NM	---	---	---	NM	NM	---	NM	NM
Benzo(a)anthracene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	---	---	NM	NM	NM	---	---	---	NM	NM	---	NM	NM
Benzo(a)pyrene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Chrysene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Fluoranthene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Fluorene	NM	NM	---	---	NM	NM	NM	---	---	---	NM	NM	---	NM	NM
Indeno(1,2,3-cd)pyrene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Naphthalene	---	NM	---	---	---	---	---	---	320	1 (J)	50	890	---	---	970
Phenanthrene	NM	NM	---	---	NM	NM	NM	---	---	---	NM	NM	---	NM	NM
Pyrene	NM	NM	---	---	NM	NM	NM	---	---	---	NM	NM	---	NM	NM
Addnl. PAHs	NM	NM	---	---	NM	NM	NM	---	---	---	---	---	---	---	---
pH	NM	NM	NM	6.5	6.55	6.3	5.65	5.9	NM	5.9	5.9	6.1	5.8	6.2	6.5
Spec. Conductivity (µS/cm)	NM	NM	NM	176	210	255	287	230	NM	260	370	250	250	280	2300

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 4*

Analyte/Compound	May-90	Aug-90	Nov-90	Feb-91	May-91	Aug-91	Nov-91	Dec-91	Feb-92	Nov-92	Mar-93	Jun-93	Sep-93	Dec-93
Arsenic	NM													
Chromium	NM	NM	NM	NM	NM	NM	46	NM						
Copper	NM													
Lead	NM	NM	NM	NM	NM	NM	19	NM						
Zinc	NM	NM	NM	NM	NM	NM	60	NM						
Acetone	NM													
Volatile Organic Cmpds.	NM													
Phenols	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	---	---	---	NM	NM	NM	NM	---	---	---
Anthracene	NM	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---
Benzo(a)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	NM	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	---	47.3	250	730	---	---	---	78	150	620	---	---	---
Phenanthrene	NM	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---
Pyrene	NM	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	NM	NM	NM	5.9	NM	5.79	5.5	5.5						
Spec. Conductivity (µS/cm)	NM	NM	NM	300	NM	347	240	270						

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 4*

Analyte/Compound	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	
Arsenic	NM	NM	NM	NM	NM	No
Chromium	NM	30	NM	NM	NM	further
Copper	NM	NM	NM	NM	NM	sampling
Lead	NM	9	NM	NM	NM	
Zinc	NM	50	NM	NM	NM	
Acetone	NM	NM	NM	NM	NM	
Volatile Organic Cmpds.	NM	NM	NM	NM	NM	
Phenols	---	---	---	---	---	
Acenaphthene/Acenaphthylene	---	---	NM	NM	NM	
Anthracene	---	---	---	---	---	
Benzo(a)anthracene	---	---	---	---	---	
Benzo(b)fluoranthene	---	---	---	---	---	
Benzo(k)fluoranthene	---	---	NM	NM	NM	
Benzo(a)pyrene	---	---	---	---	---	
Chrysene	---	---	---	---	---	
Fluoranthene	---	---	---	---	---	
Fluorene	---	---	NM	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	NM	NM	NM	
Naphthalene	170	350	150	110	180	
Phenanthrene	---	---	NM	NM	NM	
Pyrene	---	---	NM	NM	NM	
Addnl. PAHs	---	---	---	---	---	
pH	5.5	5.7	5.4	5.5	5.1	
Spec. Conductivity (µS/cm)	280	285	222	198	180	

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 10*

Analyte/Compound	Jul-86	Nov-86	Mar-87	May-87	Jun-87	Feb-88	May-88	Sep-88	Feb-89	May-89	Aug-89	Nov-89	Feb-90	May-90	Aug-90
Arsenic	NM														
Chromium	NM														
Copper	NM														
Lead	NM														
Zinc	NM														
Acetone	NM														
Volatile Organic Cmpds.	NM														
Phenols	NM	NM	NM	NM	NM	NM	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	NM	NM	17	17 (J)	---	---	---	---	---	---	---
Anthracene	---	---	NM	NM	NM	NM	2 (J)	4 (J)	NM	NM	---	NM	NM	NM	NM
Benzo(a)anthracene	---	---	---	---	NM	NM	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	NM	NM	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	NM	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM	NM
Benzo(a)pyrene	---	---	---	---	NM	NM	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	NM	NM	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	NM	NM	13	14 (J)	---	---	---	---	---	---	---
Fluorene	---	---	NM	NM	NM	NM	9 (J)	14 (J)	NM	NM	---	NM	NM	NM	NM
Indeno(1,2,3-cd)pyrene	---	---	---	---	NM	NM	---	---	---	---	---	---	---	---	---
Naphthalene	760	---	---	---	430	NM	340	230	---	63	---	---	70	---	---
Phenanthrene	---	---	NM	NM	NM	NM	35	49	NM	NM	---	NM	NM	NM	NM
Pyrene	---	---	NM	NM	NM	NM	8 (J)	10 (J)	NM	NM	---	NM	NM	NM	NM
Addnl. PAHs	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---
pH	NR	10.5	7.45	6.2	5.75	6.2	NM	6	5	6.1	6	6	7.6	NM	NM
Spec. Conductivity (µS/cm)	NR	234	375	827	398	170	260	230	270	190	190	100	1200	NM	NM

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 10*

Analyte/Compound	Nov-90	Feb-91	May-91	Aug-91	Nov-91	Dec-91	Feb-92	Nov-92	Mar-93	Jun-93	Sep-93	Dec-93	Mar-94	Jun-94
Arsenic	NM													
Chromium	NM	20												
Copper	NM													
Lead	NM	8												
Zinc	NM	30												
Acetone	NM													
Volatile Organic Cmpds.	NM													
Phenols	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	13	---	13	---	NM	NM	NM	NM	NM	---	---	---
Anthracene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	4.6	10	---	---	---	---	---	12	---	---	---	---	---
Fluorene	NM	NM	NM	NM	10	NM	NM	NM	NM	NM	NM	---	---	---
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	78	120	---	29	---	---	14	12	10	---	---	---	23
Phenanthrene	NM	NM	NM	NM	14	NM	NM	NM	NM	NM	NM	---	---	---
Pyrene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---
Addnl. PAHs	NM	NM	NM	NM	---	---	---	---	---	---	---	---	---	---
pH	NM	5.7	NM	5.3	5.1	5.4	5.1	5.1						
Spec. Conductivity (µS/cm)	NM	160	NM	145	115	133	109	128						

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 10*

Analyte/Compound	Sep-94	Dec-94	Mar-95	
Arsenic	NM	NM	NM	No
Chromium	NM	NM	NM	further
Copper	NM	NM	NM	sampling
Lead	NM	NM	NM	
Zinc	NM	NM	NM	
Acetone	NM	NM	NM	
Volatile Organic Cmpds.	NM	NM	NM	
Phenols	---	---	---	
Acenaphthene/Acenaphthylene	---	---	---	
Anthracene	NM	NM	NM	
Benzo(a)anthracene	---	---	---	
Benzo(b)fluoranthene	---	---	---	
Benzo(k)fluoranthene	NM	NM	NM	
Benzo(a)pyrene	---	---	---	
Chrysene	---	---	---	
Fluoranthene	---	---	---	
Fluorene	NM	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	---	
Naphthalene	---	---	---	
Phenanthrene	---	---	---	
Pyrene	---	---	---	
Addnl. PAHs	---	---	---	
pH	5	5.2	4.8	
Spec. Conductivity ( $\mu$ S/cm)	99	194	88	

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 12*

Analyte/Compound	Feb-88	May-88	Nov-91	Dec-95	Mar-96	
Arsenic	NM	NM	NM	---	---	No
Chromium	NM	NM	NM	---	93.8	further
Copper	NM	NM	NM	---	---	sampling
Lead	NM	NM	NM	---	3.77	
Zinc	NM	NM	NM	215	---	
Acetone	NM	NM	NM	---	---	
Volatile Organic Cmpds.	NM	NM	NM	---	---	
Phenols	NM	NM	NM	---	---	
Acenaphthene/Acenaphthylene	---	---	---	---	---	
Anthracene	---	---	---	---	---	
Benzo(a)anthracene	---	---	---	---	---	
Benzo(b)fluoranthene	---	---	---	---	---	
Benzo(k)fluoranthene	---	---	---	---	---	
Benzo(a)pyrene	---	---	---	---	---	
Chrysene	---	---	---	---	---	
Fluoranthene	---	---	---	---	---	
Fluorene	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	
Naphthalene	---	---	---	---	---	
Phenanthrene	---	---	---	---	---	
Pyrene	---	---	---	---	---	
Addnl. PAHs	---	---	---	111	111	
pH	5.7	NM	NR	5.3	5.3	
Spec. Conductivity (µS/cm)	73	100	NR	10	10	

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 18*

Analyte/Compound	Jun-95	
Arsenic	NM	No
Chromium	NM	further
Copper	NM	sampling
Lead	NM	
Zinc	NM	
Acetone	---	
Volatile Organic Cmpds.	---	
Phenols	NM	
Acenaphthene/Acenaphthylene	---	
Anthracene	NM	
Benzo(a)anthracene	---	
Benzo(b)fluoranthene	---	
Benzo(k)fluoranthene	---	
Benzo(a)pyrene	---	
Chrysene	---	
Fluoranthene	---	
Fluorene	NM	
Indeno(1,2,3-cd)pyrene	---	
Naphthalene	---	
Phenanthrene	---	
Pyrene	---	
Addnl. PAHs	---	
pH	6.5	
Spec. Conductivity ( $\mu\text{S/cm}$ )	65	

**Table 1**  
**Historical Groundwater Analytical Summary - Granular Layer Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 21*

Analyte/Compound	May-88	Sep-88	
Arsenic	NM	NM	No
Chromium	NM	NM	further
Copper	NM	NM	sampling
Lead	NM	NM	
Zinc	NM	NM	
Spec. Conductivity (mS/cm)	NM	NM	
Volatile Organic Cmpds.	NM	NM	
Phenols	---	NM	
Acenaphthene/Acenaphthylene	---	NM	
Anthracene	---	NM	
Benzo(a)anthracene	---	NM	
Benzo(b)fluoranthene	---	NM	
Benzo(k)fluoranthene	---	NM	
Benzo(a)pyrene	---	NM	
Chrysene	---	NM	
Fluoranthene	---	NM	
Fluorene	---	NM	
Indeno(1,2,3-cd)pyrene	---	NM	
Naphthalene	---	NM	
Phenanthrene	---	NM	
Pyrene	---	NM	
Addnl. PAHs	---	NM	
pH	NR	NM	
Spec. Conductivity ( $\mu$ S/cm)	NR	NM	

Except as noted, all values reported as  $\mu$ g/L.

--- = Below Quantitation Limits

NM = Not Measured

NR = Not Reported

J = Compound was detected at levels below the practical quantitation limit. The level reported is approximate.

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 1*

Analyte/Compound	Jan-86	Mar-86	Jul-86	Nov-86	Mar-87	May-87	Jun-87	Feb-88	May-88	Sep-88	Feb-89	May-89	Aug-89	Nov-89	Feb-90
Arsenic	NM														
Chromium	NM														
Copper	NM														
Lead	NM														
Zinc	NM														
Acetone	NM														
Volatile Organic Cmpds.	NM														
Phenols	NM	---	---	---	---	---									
Acenaphthene/Acenaphthylene	---	NM	---	---	---	NM	NM	---	---	---	---	---	---	---	---
Anthracene	---	NM	---	---	NM	NM	NM	---	---	---	NM	NM	---	NM	NM
Benzo(a)anthracene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	---	---	NM	NM	NM	---	---	---	NM	NM	---	NM	NM
Benzo(a)pyrene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Chrysene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Fluoranthene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Fluorene	NM	NM	---	---	NM	NM	NM	---	---	---	NM	NM	NM	NM	NM
Indeno(1,2,3-cd)pyrene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Naphthalene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Phenanthrene	NM	NM	---	---	NM	NM	NR	---	---	---	NM	NM	---	NM	NM
Pyrene	NM	NM	---	---	NM	NM	NR	---	---	---	NM	NM	---	NR	NM
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	NM	NM	NM	6.2	7.25	5.93	5.45	3.3	NM	3.2	3.7	3.5	3.3	3.4	3.8
Spec. Conductivity (µS/cm)	NM	NM	NM	715	924	826	1208	1300	1100	1500	2300	1200	1100	1400	8200

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 1*

Analyte/Compound	May-90	Aug-90	Nov-90	Feb-91	May-91	Aug-91	Nov-91	Dec-91	Feb-92	Nov-92	Mar-93	Jun-93	Sep-93	Dec-93
Arsenic	NM													
Chromium	NM													
Copper	NM													
Lead	NM													
Zinc	NM													
Acetone	NM													
Volatile Organic Cmpds.	NM													
Phenols	---	---	---	---	---	---	NM	NM	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Anthracene	NM	NM	NM	NM	NM	NM	---	NM						
Benzo(a)anthracene	---	---	---	---	---	---	---	NM	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	NM	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---
Benzo(a)pyrene	---	---	---	---	---	---	---	NM						
Chrysene	---	---	---	---	---	---	---	NM	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	NM	---	---	---	---	---	---
Fluorene	NM	NM	NM	NM	NM	NM	---	NM						
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	NM	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---	NM	---	---	---	---	---	---
Phenanthrene	NM	NM	NM	NM	NM	NM	---	NM						
Pyrene	NM	NM	NM	NM	NM	NM	---	NM						
Addnl. PAHs	---	---	---	---	---	---	NM	NM	---	---	---	---	---	---
pH	NM	NM	NM	3.6	NR	NM	NM	NM	NM	NM	NM	4.8	5.3	46
Spec. Conductivity (µS/cm)	NM	NM	NM	3600	NR	NM	NM	NM	NM	NM	NM	1510	1600	1730

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 1*

Analyte/Compound	Mar-94	Jun-94	Sep-94	Dec-94	Mar-95	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96	Dec-96	Mar-97	Jun-97
Arsenic	NM	NM	NM	NM	NM	---	---	---	15.1	---	---	---	10.4	---
Chromium	NM	---	NM	NM	NM	---	---	299	---	---	---	---	---	---
Copper	NM	NM	NM	NM	NM	---	---	27.4	---	---	---	---	---	---
Lead	NM	---	NM	NM	NM	---	---	7.29	4.65	---	---	---	---	---
Zinc	NM	230	NM	NM	NM	270	250	35	138	224	226	184	166	223
Acetone	NM	NM	NM	NM	NM	---	---	---	---	---	---	---	---	---
Volatile Organic Cmpds.	NM	NM	NM	NM	NM	---	---	---	---	---	---	---	---	---
Phenols	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	NM													
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	3.9	4.6	4.4	4.6	3.9	6	5.1	4.6	4.4	4.6	4.9	4.7	4.4	4.8
Spec. Conductivity (µS/cm)	1146	1350	999	1170	758	720	1737	1990	1550	NM	1490	1274	1310	1180

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 1*

Analyte/Compound	Sep-97	Jan-98	Mar-98	Jun-98	Sep-98	Dec-98	Mar-99	Jun-99	Sep-99	Nov-99
Arsenic	---	---	---	10.4	---	---	---	---	---	---
Chromium	---	---	---	---	---	---	---	---	---	---
Copper	---	---	---	---	---	---	---	---	---	---
Lead	3.09	---	---	---	---	---	---	---	---	---
Zinc	267	104	74.6	199	203	240	22.6	162	37.8	69.3
Acetone	---	---	---	---	---	---	---	---	---	---
Volatile Organic Cmpds.	---	---	---	---	---	---	---	---	---	---
Phenols	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	---	---	---	---	---	---
Anthracene	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	---	---	---
Fluorene	NM	---	---	---						
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---	---	---	---
Phenanthrene	---	---	---	---	---	---	---	---	---	---
Pyrene	---	---	---	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---
pH	4.7	4.5*	4.1	4.5	4.7	5.1	4.3	4.6	4.2	4.2
Spec. Conductivity (µS/cm)	1380	1350*	1000	1360	1410	1420	1040	1220	1040	1040

Table 2  
 Historical Groundwater Analytical Summary - Water Table Wells  
 General Timber Facility - Sanford, North Carolina

*Monitor Well No. 2*

Analyte/Compound	Jan-86	Mar-86	Jul-86	Nov-86	Mar-87	May-87	Jun-87	May-88	Sep-88	Feb-89	May-89	Aug-89	Nov-89	Feb-90	May-90
Arsenic	NM														
Chromium	NM														
Copper	NM														
Lead	NM														
Zinc	NM														
Acetone	NM														
Volatile Organic Cmpds.	NM														
Phenols	NM	---	---	---	---	---	---								
Acenaphthene/Acenaphthylene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Anthracene	NM	NM	---	---	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM
Benzo(a)anthracene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	---	---	NM	NM	NM	---	---	NR	NR	---	NM	NM	NM
Benzo(a)pyrene	---	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Chrysene	---	NM	---	---	---	---	NM	---	---	---	---	---	NM	---	---
Fluoranthene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Fluorene	NM	NM	---	---	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM
Indeno(1,2,3-cd)pyrene	NM	NM	---	---	---	---	NM	---	---	---	---	---	---	---	---
Naphthalene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	NM	NM	---	---	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM
Pyrene	NM	NM	---	---	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	NM	NM	NM	7.35	7.6	6.5	6.05	NM	7	7.2	7.4	7.1	7.5	7.5	NM
Spec. Conductivity (µS/cm)	NM	NM	NM	599	799	249	550	860	540	750	580	600	580	3700	NM

Table 2  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 2*

Analyte/Compound	Aug-90	Nov-90	Feb-91	May-91	Aug-91	Nov-91	Dec-91	Feb-92	Nov-92	Mar-93	Jun-93	Sep-93	Dec-93	Mar-94
Arsenic	NM													
Chromium	NM													
Copper	NM													
Lead	NM													
Zinc	NM													
Acetone	NM													
Volatile Organic Cmpds.	NM													
Phenols	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	---	---	NM							
Anthracene	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	NM	NM	NM	NM	NM	---	NM							
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---
Pyrene	NM	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	NM	NM	7.1	NR	NM	NM	NM	NM	NM	NM	7.06	NM	6.7	6.6
Spec. Conductivity (µS/cm)	NM	NM	530	NR	NM	NM	NM	NM	NM	NM	518	NM	590	510

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 2*

Analyte/Compound	Jun-94	Sep-94	Dec-94	Mar-95	
Arsenic	NM	NM	NM	NM	No
Chromium	---	NM	NM	NM	further
Copper	NM	NM	NM	NM	sampling
Lead	5	NM	NM	NM	
Zinc	---	NM	NM	NM	
Acetone	NM	NM	NM	NM	
Volatile Organic Cmpds.	NM	NM	NM	NM	
Phenols	---	---	---	---	
Acenaphthene/Acenaphthylene	NM	NM	NM	NM	
Anthracene	---	---	---	---	
Benzo(a)anthracene	---	---	---	---	
Benzo(b)fluoranthene	---	---	---	---	
Benzo(k)fluoranthene	---	---	---	---	
Benzo(a)pyrene	---	---	---	---	
Chrysene	---	---	---	---	
Fluoranthene	---	---	---	---	
Fluorene	NM	NM	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	---	---	
Naphthalene	---	---	---	---	
Phenanthrene	---	---	---	---	
Pyrene	---	---	---	---	
Addnl. PAHs	---	---	---	---	
pH	6.6	6.5	6.5	6.1	
Spec. Conductivity (µS/cm)	472	358	48	435	

Table 2  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

**Monitor Well No. 9**

Analyte/Compound	Jul-86	Nov-86	Mar-87	May-87	Jun-87	Feb-88	Mar-88	May-88	Sep-88	Feb-89	May-89	Aug-89	Nov-89	Feb-90	May-90	Aug-90
Arsenic	NM															
Chromium	NM															
Copper	NM															
Lead	NM															
Zinc	NM															
Acetone	NM															
Volatile Organic Cmpds.	NM															
Phenols	NM	---	---	---	---	---	---	---								
Acenaphthene/Acenaphthylene	---	---	---	---	NM	NM	NM	---	1(J)	NM	NM	---	---	---	---	---
Anthracene	---	---	NM	NM	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM	NM
Benzo(a)anthracene	---	---	---	---	NM	NM	NM	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	NM	NM	NM	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	NM	NM	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM	NM
Benzo(a)pyrene	---	---	---	---	NM	NM	NM	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	NM	NM	NM	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	NM	NM	NM	---	---	---	---	---	---	---	---	---
Fluorene	---	---	NM	NM	NM	NM	NM	---	---	---	---	NM	NM	NM	NM	NM
Indeno(1,2,3-cd)pyrene	---	---	---	---	NM	NM	NM	---	---	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	NM	NM	12	15	---	---	---	---	---	---	---
Phenanthrene	---	---	NM	NM	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM	NM
Pyrene	---	---	NM	NM	NM	NM	NM	---	---	NM	NM	---	NM	NM	NM	NM
Addnl. PAHs	---	---	---	---	---	NM	NM	---	---	---	---	---	---	NM	NM	NM
pH	NR	8.75	7.45	6.8	6.05	NM	NM	NM	7.5	7.3	7.3	NM	8.1	7.5	NM	NM
Spec. Conductivity (µS/cm)	NR	205	364	209	252	NM	NM	490	600	500	480	NM	510	3300	NM	NM

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

**Monitor Well No. 9**

Analyte/Compound	Nov-90	Feb-91	May-91	Aug-91	Nov-91	Dec-91	Feb-92	Nov-92	Mar-93	Jun-93	Sep-93	Dec-93	Mar-94	Jun-94	Sep-94	Dec-94
Arsenic	NM															
Chromium	NM	---	NM	NM												
Copper	NM															
Lead	NM	---	NM	NM												
Zinc	NM	---	NM	NM												
Acetone	NM															
Volatile Organic Cmpds.	NM															
Phenols	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Anthracene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Fluorene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	NM	---	---	---	---	---	---	---	---	---	---
Phenanthrene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---	---	---
Pyrene	NM	NM	NM	NM	---	NM	NM	NM	NM	NM	NM	---	---	---	---	---
Addnl. PAHs	NM	NM	NM	NM	---	NM	---	---	---	---	---	---	---	---	---	---
pH	NM	7.1	NR	NM	NM	NM	NM	NM	NM	7.09	6.8	6.6	6.5	6.7	6.4	6.4
Spec. Conductivity (µS/cm)	NM	460	NR	NM	NM	NM	NM	NM	NM	524	510	590	456	454	330	89

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 9*

Analyte/Compound	Mar-95	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96	Dec-96	Mar-97	Jun-97	Sep-97	Jan-98*	Mar-98	Jun-98	Sep-98
Arsenic	NM	NM	18	13.3	11.1	16.5	18.2	---	39.8	20.8	---	---	---	13.6	11.2
Chromium	NM	NM	20	20.7	14.6	21.6	21.3	19.8	29.7	45.7	---	---	---	---	---
Copper	NM	NM	---	---	---	---	---	---	---	34	---	---	---	---	---
Lead	NM	NM	30	15.4	3.83	29.6	9.93	13.8	9.36	17.8	4.07	---	---	---	---
Zinc	NM	NM	40	37.6	27	138	40.4	28	35	81.5	---	---	---	---	---
Acetone	NM	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Volatile Organic Cmpds.	NM	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenols	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	NM	---	---	---	---	---	---	---	---	---	---	---	NM	NM
Anthracene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	---	NM	NM	NM	NM										
Indeno(1,2,3-cd)pyrene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Addnl. PAHs	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	6.1	NM	7.1	7.2	7.2	7.2	NR	6.7	73	7.5	7	6.9*	7.3	7.4	7
Spec. Conductivity (µS/cm)	311	NM	498	663	523	NM	430	4520	450	300	340	440*	420	360	380



**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 11*

Analyte/Compound	Feb-88	May-88	Nov-91	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96	Dec-96	Mar-97	Jun-97	Sep-97	Jan-98*	Mar-98
Arsenic	NM	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Chromium	NM	NM	NM	220	610	589	263	204	1190	110	56.1	181	23.8	70	32.8
Copper	NM	NM	NM	---	---	27.9	26.2	27.2	---	---	---	---	---	---	---
Lead	NM	NM	NM	---	6	7.98	6.12	7.44	4.61	---	---	7.23	4.56	---	---
Zinc	NM	NM	NM	20	30	43.4	46.3	60.3	34.4	20.3	21	43.8	---	---	---
Acetone	NM	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Volatile Organic Cmpds.	NM	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Phenols	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	NM	NM										
Anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	---	---	---	NM	NM										
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	---	2 (J)	---	---	---	---	---	---	---	---	---	---	---	---	---
Phenanthrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	6.7	NM	NM	5.6	5.9	5.7	5.5	5.7	6.9	6.7	5.9	7.2	66	6.3*	5.3
Spec. Conductivity (µS/cm)	240	310	NM	53	120	117	77	NM	250	280	120	150	200	220*	60

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 11*

Analyte/Compound	Jun-98	Sep-98	Dec-98	Mar-99	Jun-99	Sep-99	Nov-99
Arsenic	---	---	---	---	---	---	---
Chromium	---	---	21.5	22.1	16.7	21.1	15
Copper	---	---	---	---	---	---	---
Lead	---	---	---	---	---	---	---
Zinc	---	---	---	---	---	20.6	---
Acetone	NM						
Volatile Organic Cmpds.	---	---	---	---	---	---	---
Phenols	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	---	---	---	---
Anthracene	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---
Fluorene	NM						
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---
Phenanthrene	---	---	---	---	---	---	---
Pyrene	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---
pH	7.1	6.5	6.3	6	6.6	5.8	6.3
Spec. Conductivity (µS/cm)	190	210	250	80	220	90	170

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

**Monitor Well No. 13**

Analyte/Compound	Nov-91	Dec-91	Feb-92	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96	Dec-96	Mar-97	Jun-97	Sep-97	Jan-98*	Mar-98
Arsenic	NM	NM	NM	23	11	---	---	---	---	---	---	---	---	---	---
Chromium	NM	NM	NM	40	20	---	---	---	---	11.2	---	---	---	---	---
Copper	NM	NM	NM	43	---	---	---	---	---	---	---	---	---	---	---
Lead	NM	NM	NM	21	7	---	---	3.62	5.3	6.27	---	8.08	6.14	---	---
Zinc	NM	NM	NM	120	70	59.5	68.1	62.1	72.9	65.5	58	76.6	77.6	64.1	61.7
Acetone	NM	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Volatile Organic Cmpds.	NM	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Phenols	NM	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	NM	NM										
Anthracene	---	---	NM	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	NM	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	---	---	NM	NM											
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	36	57	---	18	---	22	10	---	---	10	10	---	---	---	---
Phenanthrene	---	---	NM	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	---	---	NM	---	---	---	---	---	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	NM	NM	NM	5.3	4.9	5.5	5.4	5.4	NR	5.5	5.1	5.5	5.4	4.8*	4.6
Spec. Conductivity (µS/cm)	NM	NM	NM	91	100	163	130	NM	120	143	100	90	60	90*	90

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 13*

Analyte/Compound	Jun-98	Sep-98	Dec-98	Mar-99	Jun-99	Sep-99	Nov-99
Arsenic	---	---	---	---	---	---	---
Chromium	---	---	---	---	---	---	---
Copper	---	---	---	---	---	24.3	---
Lead	---	---	---	---	---	---	---
Zinc	48.4	37.4	53.8	45.5	45.6	51.5	45.4
Acetone	---	---	---	---	---	---	---
Volatile Organic Cmpds.	---	---	---	---	---	---	---
Phenols	---	---	---	---	---	---	0.01
Acenaphthene/Acenaphthylene	NM						
Anthracene	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---
Fluorene	NM						
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---
Phenanthrene	---	---	---	---	---	---	---
Pyrene	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---
pH	5.2	4.8	4.8	5.2	5.1	5.0	4.9
Spec. Conductivity (µS/cm)	90	70	90	80	70	70	80

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 14*

Analyte/Compound	Nov-91	Dec-91	Feb-92	Dec-95	Mar-96	
Arsenic	NM	NM	NM	---	---	No
Chromium	NM	NM	NM	---	---	further
Copper	NM	NM	NM	---	---	sampling
Lead	NM	NM	NM	12.1	---	
Zinc	NM	NM	NM	73.1	93.8	
Acetone	NM	NM	NM	12	---	
Volatile Organic Cmpds.	NM	NM	NM	---	---	
Phenols	---	---	---	---	---	
Acenaphthene/Acenaphthylene	---	NM	NM	NM	NM	
Anthracene	---	NM	NM	---	---	
Benzo(a)anthracene	---	---	---	---	---	
Benzo(b)fluoranthene	---	---	---	---	---	
Benzo(k)fluoranthene	---	NM	NM	---	---	
Benzo(a)pyrene	---	---	---	---	---	
Chrysene	---	---	---	---	---	
Fluoranthene	---	---	---	---	---	
Fluorene	---	NM	NM	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	
Naphthalene	23	54	76	28	---	
2-Picoline	---	NM	NM	NM	NM	
Pyrene	---	NM	NM	---	---	
Addnl. PAHs	---	---	---	---	---	
pH	NM	NM	NM	5.5	5.3	
Spec. Conductivity (µS/cm)	NM	NM	NM	627	493	

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 15*

Analyte/Compound	Nov-91	Dec-95	Mar-96	
Arsenic	NM	---	---	No
Chromium	NM	---	---	further
Copper	NM	---	---	sampling
Lead	NM	---	---	
Zinc	NM	---	---	
Acetone	NM	--	--	
Volatile Organic Cmpds.	NM	---	---	
Phenols	---	---	---	
Acenaphthene/Acenaphthylene	---	NM	NM	
Anthracene	---	---	---	
Benzo(a)anthracene	---	---	---	
Benzo(b)fluoranthene	---	---	---	
Benzo(k)fluoranthene	---	---	---	
Benzo(a)pyrene	---	---	---	
Chrysene	---	---	---	
Fluoranthene	---	---	---	
Fluorene	---	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	---	
Naphthalene	---	---	---	
Phenanthrene	---	---	---	
Pyrene	---	---	---	
Addnl. PAHs	---	---	---	
pH	NM	6.4	6.5	
Spec. Conductivity (µS/cm)	NM	527	463	

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 16*

Analyte/Compound	Nov-91	Dec-91	Feb-92	Jun-95	Sep-95	Dec-95	Mar-96	Jun-96	Sep-96	Dec-96	Mar-97	Jun-97	Sep-97	Jan-98*	Mar-98
Arsenic	NM	NM	NM	31	26	---	12.5	24.9	17.7	11.6	---	---	---	---	---
Chromium	NM	NM	NM	80	50	---	12	39.9	32.3	19.3	14.8	13.8	---	---	---
Copper	NM	NM	NM	80	64	---	---	58.6	36.4	---	---	---	---	---	---
Lead	NM	NM	NM	47	41	3.05	7.04	41.2	25.8	11	6.68	9.94	4.08	---	---
Zinc	NM	NM	NM	170	130	---	39.2	195	105	43.8	38.6	45.9	42.1	---	---
Acetone	NM	NM	NM	61	12	13	24	---	---	---	11	28	22	---	---
Volatile Organic Cmpds.	NM	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Phenols	13	---	---	---	---	---	---	NM	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	---	---	---	NM	NM										
Anthracene	---	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Benzo(a)pyrene	---	NM	---	---	---	---	---	---	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Fluorene	---	NM	NM												
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	100	140	96	5.2	NM	NM									
Phenanthrene	---	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Pyrene	---	NM	NM	---	---	---	---	---	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
pH	NM	NM	NM	12.4	11.5	11.3	10.8	10.7	10.7	11.4	9.9	8.6	8.8	9.6*	8.8
Spec. Conductivity (µS/cm)	NM	NM	NM	1173	687	957	280	NM	200	3430	200	130	180	230*	330

\*\* Only sample tested for Appendix IX metals, Appendix IX volatiles, Appendix IX semivolatiles, Appendix IX pesticides, sulfide and cyanide (analytes are BQL unless otherwise stated)

\*\* See Quarterly Compliance Monitoring Report for details

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 16*

Analyte/Compound	Jun-98	Sep-98	Dec-98	Mar-99	Jun-99**	Sep-99	Nov-99
Arsenic	---	---	---	---	---	---	---
Chromium	---	---	---	---	---	---	---
Copper	---	---	---	---	---	---	---
Lead	---	---	---	---	---	---	---
Zinc	---	---	---	---	---	---	---
Acetone	---	---	---	---	---	---	---
Volatile Organic Cmpds.	---	---	---	---	---	---	---
Phenols	---	---	---	---	---	---	---
Acenaphthene/Acenaphthylene	NM	NM	NM	NM	NM	NM	NM
Anthracene	---	---	---	---	---	---	---
Benzo(a)anthracene	---	---	---	---	---	---	---
Benzo(b)fluoranthene	---	---	---	---	---	---	---
Benzo(k)fluoranthene	---	---	---	---	---	---	---
Benzo(a)pyrene	---	---	---	---	---	---	---
Chrysene	---	---	---	---	---	---	---
Fluoranthene	---	---	---	---	---	---	---
Fluorene	NM	NM	NM	NM	NM	NM	NM
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	---	---
Naphthalene	---	---	---	---	---	---	---
Phenanthrene	---	---	---	---	---	---	---
Pyrene	---	---	---	---	---	---	---
Addnl. PAHs	---	---	---	---	---	---	---
pH	8.2	7.5	8	9.1	7.1	8.8	8.6
Spec. Conductivity (µS/cm)	300	310	370	270	320	380	370

\*\* Only sample tested for Appendix IX metals, App

\*\* See Quarterly Compliance Monitoring Report fo

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 17*

Analyte/Compound	Nov-91	Dec-91	Feb-92	
Arsenic	NM	NM	NM	No
Chromium	NM	NM	NM	further
Copper	NM	NM	NM	sampling
Lead	NM	NM	NM	
Zinc	NM	NM	NM	
Acetone	NM	NM	NM	
Volatile Organic Cmpds.	NM	NM	NM	
Phenols	---	---	---	
Acenaphthene/Acenaphthylene	---	---	---	
Anthracene	---	NM	NM	
Benzo(a)anthracene	---	---	---	
Benzo(b)fluoranthene	---	---	---	
Benzo(k)fluoranthene	---	NM	NM	
Benzo(a)pyrene	---	---	---	
Chrysene	---	---	---	
Fluoranthene	---	---	---	
Fluorene	---	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	---	
Naphthalene	---	---	---	
Phenanthrene	---	NM	NM	
Pyrene	---	NM	NM	
Addnl. PAHs	---	---	---	
pH	NM	NM	NM	
Spec. Conductivity ( $\mu$ S/cm)	NM	NM	NM	

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 20*

Analyte/Compound	May-88	Nov-91	Dec-91	Feb-92	
Arsenic	NM	NM	NM	NM	No
Chromium	NM	NM	NM	NM	further
Copper	NM	NM	NM	NM	sampling
Zinc	NM	NM	NM	NM	
Acetone	NM	NM	NM	NM	
Volatile Organic Cmpds.	NM	NM	NM	NM	
Phenols	NM	NM	---	---	
Acenaphthene/Acenaphthylene	---	---	NM	NM	
Anthracene	---	---	NM	NM	
Benzo(a)anthracene	---	---	---	---	
Benzo(b)fluoranthene	---	---	---	---	
Benzo(k)fluoranthene	---	---	NM	NM	
Benzo(a)pyrene	---	---	---	---	
Chrysene	---	---	---	---	
Fluoranthene	---	---	---	---	
Fluorene	---	---	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	---	---	
Naphthalene	82	---	---	---	
Phenanthrene	2 (J)	---	NM	NM	
Pyrene	---	---	NM	NM	
Addnl. PAHs	3 (J)	---	---	---	
pH	NM	NM	NM	NM	
Spec. Conductivity ( $\mu$ S/cm)	360	NM	NM	NM	

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 22*

Analyte/Compound	May-88	Nov-91	Jun-95	Sep-95	Dec-95	Mar-96	
Arsenic	NM	NM	NM	NM	---	---	No
Chromium	NM	NM	NM	NM	72.5	213	further
Copper	NM	NM	NM	NM	---	28	sampling
Lead	NM	NM	NM	NM	---	5.25	
Zinc	NM	NM	NM	NM	---	33.7	
Acetone	NM	NM	NM	NM	---	---	
Volatile Organic Cmpds.	NM	NM	NM	NM	---	---	
Phenols	NM	NM	NM	NM	---	---	
Acenaphthene/Acenaphthylene	---	---	NM	NM	NM	NM	
Anthracene	---	---	NM	NM	---	---	
Benzo(a)anthracene	---	---	NM	NM	---	---	
Benzo(b)fluoranthene	---	---	NM	NM	---	---	
Benzo(k)fluoranthene	---	---	NM	NM	---	---	
Benzo(a)pyrene	---	---	NM	NM	---	---	
Chrysene	---	---	NM	NM	---	---	
Fluoranthene	---	---	NM	NM	---	---	
Fluorene	---	---	NM	NM	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	NM	NM	---	---	
Naphthalene	---	---	NM	NM	---	---	
Phenanthrene	---	---	NM	NM	---	---	
Pyrene	---	---	NM	NM	---	---	
Addnl. PAHs	---	---	NM	NM	---	---	
pH	NR	NM	NM	11.5	6.1	5.8	
Spec. Conductivity (µS/cm)	NR	NM	385	680	223	103	

**Table 2**  
**Historical Groundwater Analytical Summary - Water Table Wells**  
**General Timber Facility - Sanford, North Carolina**

*Monitor Well No. 23*

Analyte/Compound	Nov-91	Feb-92	Nov-92	Dec-95	Mar-96	
Arsenic	NM	NM	NM	---	---	No
Chromium	NM	NM	NM	---	---	further
Copper	NM	NM	NM	---	---	sampling
Lead	NM	NM	NM	---	---	
Zinc	NM	NM	NM	---	---	
Acetone	NM	NM	NM	---	---	
Volatile Organic Cmpds.	NM	NM	NM	---	---	
Phenols	---	---	---	---	---	
Acenaphthene/Acenaphthylene	---	NM	NM	NM	NM	
Anthracene	---	NM	NM	---	---	
Benzo(a)anthracene	---	---	---	---	---	
Benzo(b)fluoranthene	---	---	---	---	---	
Benzo(k)fluoranthene	---	NM	NM	---	---	
Benzo(a)pyrene	---	---	---	---	---	
Chrysene	---	---	---	---	---	
Fluoranthene	---	---	---	---	---	
Fluorene	---	NM	NM	NM	NM	
Indeno(1,2,3-cd)pyrene	---	---	---	---	---	
Naphthalene	---	---	---	---	---	
Phenanthrene	---	NM	NM	---	---	
Pyrene	---	NM	NM	---	---	
Addnl. PAHs	---	---	---	NM	NM	
pH	NM	NM	NM	6.2	5.8	
Spec. Conductivity (µS/cm)	NM	NM	NM	433	370	

\* pH and Spec. Conductivity reported for Dec 15, 1997

Except as noted, all values reported as µg/L

--- = Below Quantitation Limits

NM = Not Measured

NM = Not Reported

J = Compound was detected at levels below the practical quantitation limit. The level reported is approximate.