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September 1, 1994

Project No. 93009

Mr. Bruce Linton
Hazardous Materials Specialist
Site Management Section
State of Vermont
Department of Environmental Conservation
103 South Main Street, West Building
Waterbury, Vermont 05671-0404

Transmittal
Revised Final Report
Supplemental Site Assessment
Chesapeake Hardwood Products, Inc.
Hancock, Vermont

Dear Mr. Linton:

Enclosed is one copy of the revised final Supplemental Site Assessment (SSA) Report for the Chesapeake Hardwood Products, Inc. (CHP) (formerly Weyerhaeuser Company [Weyerhaeuser]) facility in Hancock, Vermont. This report revision includes data relative to the resampling of Monitoring Well MW-5, which was completed in response to your comments regarding the November 8, 1993 SSA Report. Comments on the November 8, 1993 SSA Report were presented in a letter to Mr. James P. Odendahl of Weyerhaeuser dated April 12, 1994. Our responses to those comments were forwarded to you in a letter dated May 13, 1994. Based on our responses and subsequent telephone discussions, the resampling and reanalysis of Monitoring Well MW-5 for Target Compound List semivolatile organic compounds (Comment No. 12) was the only field action item required to finalize the SSA Report.

Based on the results of the SSA (including the resampling/reanalysis of Monitoring Well MW-5), Remcor believes that additional investigation and remediation is not warranted at the CHP facility. Remcor, Inc., therefore, recommends that Monitoring Wells MW-1 through MW-6 be abandoned.

Monitoring well abandonment will be performed in accordance with applicable State of Vermont guidelines. Well abandonment will not be performed until Weyerhaeuser has received written approval to do so from the Vermont Department of Environmental Conservation.

We trust that this revised report provides you with the requested information. Unless we are contacted by you with additional comments in 45 days, we will contact you to discuss well abandonment procedures. Pending your written approval, Weyerhaeuser would like to abandon the wells by the end of the year. Should you have questions or comments, please contact us or Weyerhaeuser at your earliest convenience.

Respectfully submitted,

Kurt P. Paschl
Assistant Project Geologist

Lawrence M. Martin, P.E.
Senior Project Manager

KPP:LMM:chf:25826
Enclosure

cc w/enc: Mr. James P. Odendahl, Weyerhaeuser
Mr. Robert McCubbins, CHP

REVISED FINAL REPORT
VOLUME I

SUPPLEMENTAL SITE ASSESSMENT

CHESAPEAKE HARDWOOD PRODUCTS, INC.
FACILITY
HANCOCK, VERMONT

prepared for

WEYERHAEUSER COMPANY
TACOMA, WASHINGTON

SEPTEMBER 1, 1994

PROJECT NO. 93009

REMCOR, INC.
PITTSBURGH, PENNSYLVANIA

EXECUTIVE SUMMARY

Remcor, Inc. (Remcor) prepared this Supplemental Site Assessment (SSA) report, on behalf of the Weyerhaeuser Company, to document near-surface and subsurface conditions at the Chesapeake Hardwood Products, Inc. facility in Hancock, Vermont. The main objective of the SSA was to provide further investigative information to the Vermont Department of Environmental Conservation (VDEC) so that they can make a final disposition regarding the contamination on the Site.

To assess conditions at the Site (and provide the VDEC with the information they required), Remcor installed 6 monitoring wells and advanced 14 additional soil borings for the collection and analysis of soil and ground water samples in accordance with a Work Plan that has been pre-approved by the VDEC. In addition to the newly installed wells/borings, one on-Site water supply well and one off-Site water supply well were sampled. These two supply wells are the closest identified ground water receptors to the Site. Locations for the borings and monitoring wells were selected based on information concerning historic operating and waste handling procedures and VDEC guidance. Site areas being assessed included the former burn pit, downgradient of the former burn pit, the former concrete settling vault/ drainage swale, stressed vegetation area, and background.

The dominant soil type at the site is a silty sand and gravel that is the result of glaciofluvial sequences. This soil contains a shallow water-bearing zone beneath the Site, with the water table ranging from 8 to 15 feet below ground surface. Shallow water-bearing zone ground water beneath the Site flows generally from north to south. Estimation of the hydraulic conductivity of the shallow water-bearing zone via single-well testing (i.e., slug tests) was on the order of 6×10^{-3} centimeters per second. Calculation of the average linear velocity of ground water beneath the site was determined to be 168 feet per year.

Analyses of 8 Site ground water samples and 22 Site soil samples indicate that:

- Site soils do not contain constituents of concern at concentrations greater than regulatory levels.
- Site ground water does not contain constituents of concern at concentrations greater than regulatory levels.

Based on the findings of the SSA, further evaluation and/or remediation of Site soil and ground water is not recommended. Remcor recommends that no further action be taken.

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1.0 INTRODUCTION

This report describes the methodologies, results, conclusions, and recommendations associated with the implementation of a Supplemental Site Assessment (SSA) at the Chesapeake Hardwood Products, Inc. (CHP)[1] facility in Hancock, Vermont (Site) (Figure 1). The SSA was conducted by Remcor, Inc. (Remcor) on behalf of Weyerhaeuser Company (Weyerhaeuser), in accordance with the scope of work described in the SSA Final Work Plan.[2] The SSA Final Work Plan was approved by the Vermont Department of Environmental Conservation (VDEC) prior to its implementation and developed based on the following:

- Requirements put forth by the VDEC[3]
- VDEC correspondence provided for our review
- The VDEC Site Inspection (SI) Report[4]
- A Site visit[5] and our interpretation of site conditions
- Weyerhaeuser's Request for Proposal (RFP), dated December 28, 1992.

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[1] The subject facility (Site) was owned and operated by Weyerhaeuser from 1960 to 1989.

[2] Remcor, Inc., July 16, 1993, "Final Work Plan, Supplemental Site Assessment, Chesapeake Hardwood Products, Inc. Facility, Hancock, Vermont," Prepared for Weyerhauser Company, Tacoma, Washington, Project No. 93009.1.

[3] VDEC correspondence of October 22, 1992 to Chesapeake Hardwood Products, Inc. re: "Possible subsurface contamination resulting from past practices at Chesapeake Hardwood Products, Inc. in Hancock, Vermont by the former owner Weyerhaeuser."

[4] Report entitled, "Weyerhaeuser Company, Route 100, Hancock, Vermont, 05748, EPA ID#: VTD002084309, Site Inspection, June 1989, Vermont Agency of Natural Resources, Department of Conservation."

[5] Lawrence M. Martin of Remcor met with Larry Jacques and Bob McCubbin of CHP on January 18, 1992 and completed a site walk-through.

The SSA Final Work Plan was designed to assess five areas of the Site. These areas and their associated monitoring wells/soil borings include (Figure 2):

- The former burn pit:
  - Monitoring Well MW-4
  - Soil Borings SB-1, SB-2, SB-3, and SB-4
- Downgradient of the former burn pit:
  - Monitoring Well MW-5
- The former concrete settling vault/drainage swale:
  - Monitoring Wells MW-2 and MW-6
  - Soil Borings SB-5, SB-6, SB-7, SB-8, SB-10, SB-11, SB-12, SB-13, and SB-14
- Stressed vegetation area:
  - Monitoring Well MW-3
  - Soil Boring SB-9
- Background:
  - Monitoring Well MW-1.

Based on Remcor's initial interpretation of potential site conditions, the location of Monitoring Well MW-5 selected by VDEC[3] was believed to be downgradient of the former burn pit. Actual site conditions indicated that the location of Monitoring Well MW-5 is located downgradient of the wood pile and parts of the drainage swale (Figure 2). The location of Monitoring Well MW-5 appears to assess the overall downgradient ground water quality from the site.

The remainder of this chapter discusses the Site background, its regional setting, previous Site investigations, and SSA objectives. Chapter 2.0 describes the specific methodologies

used for sample and data collection. The results of the SSA are summarized in Chapter 3.0. Conclusions and recommendations are provided in Chapters 4.0 and 5.0, respectively, followed by a closing in Chapter 6.0.

1.1 SITE BACKGROUND

The Site (Figure 2) was owned and operated by the Blair family, Owens Corning Glass, and Roddis Plywood Company (Roddis) prior to 1960. Site facilities were constructed as a veneer plant in 1927. During 1949, the plant began production of stock panels for use as interior panels in mobile homes. Weyerhaeuser purchased the facility from Roddis in 1960 and began a hardwood plywood paneling operation. The veneer cutting operation ceased in 1969 concurrent with the expansion of a prefinish operation begun in 1956. Weyerhaeuser continued operation of the facility until approximately 1989 when the plant was purchased by CHP.

Information obtained from the SI Report[4] indicated that materials used at the facility included solvents from the prefinishing operations and urea formaldehyde glue. Prior to 1971, waste solvents were apparently placed in a pit (burn pit) located at the south end of the facility and incinerated. From 1971 to 1983, solvents and glue wastes were apparently placed into an unlined concrete settling vault adjacent to the Site manufacturing building. Vault supernatant discharged to a surface (drainage) swale. Settled sludge and solids from this vault were drummed and disposed at two off-site landfills. From 1983 to the present, site-derived wastes have been recycled or contained and handled in accordance with Resource Conservation and Recovery Act (RCRA) requirements.

1.2 REGIONAL SETTING

The following sections summarize pertinent aspects of Site regional geology and hydrogeology.

1.2.1 Geology

The Site is located in the Green Mountains Physiographic Province. This area is characterized by mountains with elevations reaching approximately 2,000 feet above mean sea level (ft-msl) and predominantly north-south trending valley lowlands.

The Site is situated on a valley floodplain on the west side of the White River at an elevation of approximately 890 to 900 ft-msl. The White River Valley, near Hancock, has thick deposits of stratified glacial drift. The bedrock that underlies the stratified glacial drift and forms the adjacent mountains is part of the Pinney Hollow Formation.[4] The Pinney Hollow Formation primarily consists of two units: a lower pale green quartz-chlorite-muscovite schist and an upper dark green albite-epidote-calcite-chlorite schist. The thickness of the Pinney Hollow Formation ranges between 1,000 and 1,500 feet.

The area surrounding the town of Hancock, Vermont is situated on the eastern limb of the Green Mountain Anticlinorium, which trends north. The eastern limb of the anticline is broadly folded and dips moderately to the east.

1.2.2 Hydrogeology

Unconsolidated deposits and bedrock are the two principal types of aquifers in Vermont. Unconsolidated aquifers generally consist of stratified drift and till; bedrock aquifers consist of carbonate and crystalline rocks.

Aquifers beneath the Site occur in both unconsolidated glacial deposits and in crystalline bedrock. The unconsolidated deposits are primarily stratified glacial drift produced during glaciofluvial sequences. These unconsolidated aquifers are typically unconfined and have the potential to yield large amounts of water, especially in areas where the deposits may have a greater saturated thickness and are coarser grained. The stratified glacial drift aquifers are generally 10 to 70 feet in depth and commonly yield 30 to 400 gallons per minute (gpm).[6]

The crystalline bedrock aquifers have little primary porosity, and the occurrence and flow of ground water is controlled by the presence and frequency of fractures. The degree of fracturing generally decreases with depth; therefore, the storage capacity of a crystalline aquifer is small and decreases with depth. Crystalline bedrock aquifers proximate to the Site commonly range from 100 to 600 feet deep and typically yield 1 to 10 gpm.[6] Crystalline bedrock aquifers are generally confined in the vicinity of the Site.

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[6] National Water Summary, 1984, "Hydrologic Events, Selected Water-Quality Trends, and Ground-Water Resources," United States Geological Survey, Water Supply Paper 2275.

1.3 PREVIOUS INVESTIGATION

In September 1988, a SI was performed by the VDEC to evaluate historic on-site hazardous waste handling and disposal practices. During the SI, on-site surface soil samples, off-site river sediment samples, river water samples, and ground water supply well samples were collected and submitted for laboratory analyses.

On-site surface soil samples collected from the burn pit and the concrete settling vault areas contained detectable concentrations of semivolatile organic compounds (SVOCs). Lead and zinc were detected in a soil sample collected from the burn pit, and mercury was detected in the soil sample collected from the vicinity of the concrete settling vault area. Formaldehyde was detected in a burn pit soil sample and one of the samples collected from the drainage swale. No volatile organic compounds (VOCs), pesticides, or polychlorinated biphenyls (PCBs) were detected in the surface soil samples.

Off-site river sediment samples were collected from the White River at locations upstream and downstream of the Site. No SVOCs were detected in the samples, and metal concentrations for both locations were similar. River water samples collected at these same locations contained no detectable VOCs.

Samples from three bedrock ground water supply wells were collected during the SI: an on-site well (main well), the Andrews residence well, and the Deering residence well (Figure 2). The main well sample was analyzed for VOCs, SVOCs, pesticides, PCBs, formaldehyde, and total phenols; none of these compounds were detected. The Andrews residence well

sample was analyzed for VOCs and metals; VOCs were not detected, and metal concentrations were detected at acceptable concentrations. VOCs, SVOCs, pesticides, PCBs, formaldehyde, and metals were analyzed for in the sample collected from the Deering residence well; none of these organic compounds were detected, and metal concentrations were detected at acceptable concentrations.

1.4 OBJECTIVES

Based on the SI results, the VDEC determined that "a final disposition regarding the contamination on site could not be made without further subsurface soil and waste investigation."[3] The SSA was designed to provide such further investigative information.

A secondary, implied objective of the SSA was to develop sufficient data regarding Site subsurface environmental conditions (soil and ground water) to make an assessment as to the potential impact on human health.

These objectives have been achieved through the completion of the following tasks:

- Collection of soil samples from within the former burn pit, downgradient from the former burn pit in an area of disturbed vegetation at the south end of the Site, and at a background location
- Collection of soil samples proximate to the former burn pit and along the drainage swale
- Analyses of selected soil samples for VOCs (if necessary), SVOCs and formaldehyde, and additional analyses of selected soil samples for VOCs, zinc, copper, lead, and mercury analyses as well as for SVOCs and formaldehyde
- Installation of six on-site ground water monitoring wells

- Collection of ground water samples from Site monitoring wells and local ground water supply wells, including the CHP main well and the Deering Service Center well

- Analysis of ground water samples for VOCs, SVOCs, formaldehyde, and total and dissolved cadmium, copper, lead, mercury, and zinc.

2.0 ASSESSMENT METHODOLOGIES

During implementation of the SSA, six monitoring wells (MW-1 through MW-6) were installed from August 2 to 7, 1993. Analytical soil samples were collected from monitoring well borings MW-1 through MW-5. A sample collection/analyses summary is presented in Table 1. Monitoring well development was performed upon completion of drilling activities, and the newly installed monitoring wells were subsequently sampled along with two supply wells (Site main well and Deering Service Center Well) on August 23, 1993. Single-well tests (i.e., slug tests) were conducted concurrently with the ground water sampling to estimate the hydraulic conductivity of the shallow water-bearing zone (aquifer) in the vicinity of each monitoring well.

Advancement and sampling of 14 soil borings (SB-1 through SB-14) was completed in conjunction with monitoring well installation activities. Soil samples were collected from the soil borings for analytical analyses in accordance with the SSA Final Work Plan (Table 1); the results are discussed in Section 2.2.

2.1 MONITORING WELL AND SOIL BORING DRILLING

Remcor subcontracted East Coast-Thomas Environmental, Inc. (East Coast) of Wallingford, Connecticut to conduct soil boring and monitoring well installation activities. Soil borings and monitoring wells were advanced via a truck-mounted rotary drill rig using hollow-stem augers. Split-barrel soil samplers were used in conjunction with the hollow-stem augers to collect soil samples.

Boring logs are presented in Appendix A.

2.1.1 Hollow-Stem Augering

Monitoring well boreholes were advanced using 6-1/4-inch inside diameter hollow-stem augers. Split-barrel soil sampling was performed using a 2-foot long, 2-inch diameter split barrel driven by a 140-pound hammer. Continuous soil samples were collected at each monitoring well location from the ground surface to at least the depth of the ground water table. Split-barrel soil samples collected below the ground water table were obtained at 5-foot vertical intervals (if necessary). Soil sampling was performed to observe the soil stratigraphy and for photoionization organic vapor detector (PID) screening.

Soil borings were advanced using 4-1/4-inch inside diameter hollow-stem augers. Split-barrel soil sampling was performed continuously in each soil boring using a 2-foot long, 2-inch diameter split barrel sampler.

Standard penetration resistance (SPR) was evaluated in accordance with the American Society for Testing and Materials (ASTM) Method D1586-74. By this method, the number of blows required for a 140-pound weight, free falling through 30 inches, to advance a 2-inch diameter split-barrel sampler each 6-inch interval over the 2-foot sampling length was recorded. SPR is calculated by adding the blow counts over the second and third 6-inch intervals. The amount of soil recovered in each individual split-barrel sample was also recorded. All split-barrel samples were field-logged using the Unified Soil Classification System (USCS), which

utilizes standard terminology in the description of color, grain size, moisture content, and other characteristics.

2.1.2 Decontamination

Before drilling commenced at each borehole location, the drill rig and all downhole drilling equipment was decontaminated with a pressurized hot water/steam generator on a temporary decontamination pad constructed near the south end of the Manufacturing Building. Decontamination was performed to reduce the potential of cross-contamination between boreholes from drilling activities. Decontamination water was contained in 55-gallon drums, labeled, and staged near the decontamination area.

The split-barrel soil sampler was decontaminated before each soil sample was collected. The sampling equipment decontamination protocol was as follows:

- Wash with potable water and Alconox®
- Rinse with potable water
- Rinse with distilled water
- Rinse with 5 percent nitric acid
- Rinse with isopropanol
- Rinse with distilled water.

2.2 SOIL SAMPLING AND ANALYSES

Soil samples were collected for analytical analyses from 5 of 6 monitoring well locations and 11 of 14 soil borings (Table 1). Two soil samples were collected from monitoring well boreholes MW-1 through MW-4. The first soil sample was collected from the interval of 0 to 1 foot below ground surface (ft-bgs). The second soil sample from the MW-1 borehole was

collected from the interface of the unsaturated zone and the top of the water table to assess subsurface background conditions. The second soil samples from the MW-2, MW-3, and MW-4 boreholes were collected from the interval exhibiting the most potential impact from Site activities (if any) as evaluated by visual observations/PID measurements. One soil sample was collected from the MW-5 borehole at a depth interval between 8 and 10 ft-bgs.

With the exception of soil boring SB-4, one soil sample was collected from each of the selected soil borings (Table 1) defined by the SSA Work Plan. Three soil samples were collected at soil boring SB-4: from 0 to 1 ft-bgs, from the interface of the unsaturated zone and the top of the water table, and from 4 to 6 ft-bgs. Collection of soil samples from the remaining soil borings selected was based on the criteria for the evaluation of potentially impacted soil and the relative locations of the soil borings to each other.

Criteria for collection of soil samples from potentially impacted intervals was based on:

- The interval exhibiting the highest reading from PID screening of split-barrel soil samples.
- The interval showing the greatest impact from visual/olfactory observations.
- The interval intersecting the interface of the unsaturated zone and the top of the water table, if no impact was noted from PID screening readings and visual/olfactory observations.

The collection depth for each soil sample is presented in Table 1 and recorded on the boring logs in Appendix A.

2.2.1 Matrix Sample Collection

Soil samples were collected during borehole advancement using a split-barrel soil sampler advanced in front of the lead hollow-stem auger. Upon retrieval of each split-barrel soil sample, a VOC soil sample was collected. The remaining portion of the split-barrel soil sample was field-screened for the possible presence of VOCs using a PID (HNu™ with an 11.7-electron volt probe). PID readings are recorded on the boring logs in Appendix A. VOC soil samples were collected prior to PID screening to minimize the potential for VOC (if present) volatilization. If the soil sample collection interval was selected for additional testing (e.g., metals), additional sample jars were filled as required.

VOC sampling and PID screening were conducted at each of the monitoring well and soil boring locations. One VOC sample was submitted for analysis based on an elevated PID reading (Appendix A). If VOCs were not detected by the PID in the split-barrel soil sample from an individual borehole, no VOC soil sample was submitted for analysis. VOC soil samples, however, were submitted from the borings for monitoring wells MW-1 through MW-4 regardless of PID response.

Soil samples were placed in a cooler with ice for shipment to the analytical laboratory. Chain-of-Custody (COC) protocols were followed at all times.

Soil samples were submitted to Ceimic Corporation (Ceimic) of Narragansett, Rhode Island. Analyses of soil samples collected from the borings for monitoring wells MW-1 through MW-4 included Target Compound List (TCL) VOCs by Method SW-846 8240, TCL SVOCs

by Method SW-846 8270, formaldehyde by Method SW-846 8315, lead by Method SW-846 7421, mercury by Method SW-846 7471, and copper and zinc by Method SW-846 6010. Soil samples from soil boring SB-4 were analyzed for formaldehyde only. Soil samples collected from soil borings SB-1, SB-2, and SB-3 located in or near the burn pit were analyzed for TCL SVOCs, formaldehyde, copper, lead, mercury, and zinc. Other soil samples collected from selected soil borings at the Site were analyzed for TCL SVOCs and formaldehyde. Soil samples from soil borings SB-2, SB-3, SB-4, SB-5, SB-7, SB-8, SB-9, SB-10, and SB-14 (Table 1) were submitted for analysis of TCL VOCs.

2.2.2 Quality Control Samples

In addition to the soil samples collected to characterize the Site, six soil sample related quality control (QC) samples were collected (Table 1). An equipment blank was prepared by pouring laboratory-supplied deionized water through a split-barrel sampler into appropriate laboratory-prepared sample bottles and submitted for analysis of the full parameter suite. The equipment blank is used to demonstrate whether or not contamination could have originated with the sample collection procedure. A duplicate soil sample was prepared from monitoring well MW-4 (Sample WY-MW04-0001D) to evaluate the reproducibility of the sample collection methods and analytical results. Trip blanks were prepared at the analytical laboratory and accompanied the sample bottles during all phases of shipment. Trip blanks were analyzed for TCL VOCs and formaldehyde. A trip blank is used to demonstrate whether or not contamination could have originated with the sample handling and transport methods.

2.3 MONITORING WELL CONSTRUCTION

Monitoring wells were constructed of flush-threaded, 2-inch diameter, Schedule 40 polyvinyl chloride (PVC) riser and 10 feet of PVC, 0.010-inch slotted screen fitted with a flush-threaded end cap. The PVC casing was inserted into the boring with the hollow-stem augers left in place to the total depth of the boring. The screen interval was placed to intersect the saturated zone, with approximately 5 feet of screen extended down into the saturated zone and 5 feet extending above the static water level at the time of installation as requested by VDEC.[3] PVC riser was added until approximately 2 to 3 feet protruded above the ground surface. Clean silica sand was placed in the annular space between the screen and the bore-hole wall to a depth approximately 0.5 foot above the top of the screen. Hollow-stem augers were incrementally removed from the boring as the sand pack was being placed. A bentonite pellet seal with a thickness of approximately 1.5 to 2 feet was placed on top of the sand pack and hydrated with potable water. A bentonite/cement grout mix was placed on top of the bentonite seal in the annular space until it reached the ground surface. The PVC casing was capped with a water-tight lid. A 4-inch diameter protective steel casing equipped with locking lid was placed over the PVC casing to approximately 2.5 to 3 feet above the ground surface. A thick cement mix was placed around the protective steel casing. Detailed as-built drawings of each monitoring well are contained with the boring logs in Appendix A. Monitoring well construction data is provided in Table 2.

2.3.1 Monitoring Well Development

Following their completion, each monitoring well was developed by bailing. Dedicated stainless steel bailers and polyethylene cords were used to develop each monitoring well.

Well development included the removal of up to 10 well volumes of ground water and monitoring the pH, specific conductance, and temperature of the water until the readings stabilized. Ground water generated during well development was contained in 55-gallon drums and staged on site for subsequent off-Site disposal.

2.3.2 Survey of Monitoring Wells

A registered professional land surveyor, Gary Rapanotti Land Surveyor of Springfield, Vermont, was subcontracted to horizontally and vertically survey all site monitoring wells (MW-1 through MW-6), soil borings (SB-1 through SB-14), and the bridge railing over the White River. The datum for the survey was a State of Vermont benchmark elevation on a bridge near the intersection of State Routes 100 and 125. Monitoring well elevations were surveyed at the ground surface and at the measuring point on top of the PVC casing. The surveyed elevations, at the measuring point of each monitoring well, were measured to the nearest 0.01 foot.

2.4 GROUND WATER SAMPLING AND ANALYSES

Ground water samples were collected on August 23, 1993 from the newly installed monitoring wells (MW-1 through MW-6) and two supply wells (Site main well and Deering Service Center well) proximate to the Site (Figure 2). Ground water sampling was performed two weeks after monitoring well development. Ground water samples were recollected from Monitoring Well MW-5 on June 24, 1994.

2.4.1 Matrix Sample Collection

Ground water levels (Table 3) were measured in each monitoring well from a marked measuring point on top of the PVC casing on four dates: following development on August 7, 1993, prior to ground water sample collection, on September 15, 1993, and finally on September 29, 1993. Ground water levels were also measured on June 24, 1994 during the recollection of ground water samples from Monitoring Well MW-5. Monitoring wells were purged of three well volumes prior to sampling using laboratory-washed, bottom-filling, top-draining, stainless steel bailers with dedicated 3/8-inch polyethylene cord. The pH, specific conductance, and temperature of the purge water was monitored after each successive well volume was removed to verify the stabilization of these parameters, which indicates that water representative of the formation has entered the monitoring well. Ground water purge sheets are presented in Appendix G.

The supply wells and their associated discharge lines were purged prior to sampling by running water out of the faucet nearest to the supply well: in the basement level of the boiler room for the Site main well, and on the south side of the service center building for the Deering Service Center well. Both faucets were allowed to run for a minimum of 15 minutes (approximately 120 gallons purged) before sampling was conducted.

Ground water samples were placed in clean, laboratory-supplied sample bottles following standard sampling protocols. Samples collected for analysis were placed in a cooler with ice for shipment to the analytical laboratory.

Sample documentation included labeling appropriate sample bottles and completing COC and request-for-analysis (R/A) forms that accompanied the sample shipment to the analytical laboratory. COC protocols were followed at all times.

Ground water samples were submitted to Ceimic for analysis of TCL VOCs by Method SW-846 8240, TCL SVOCs by Method SW-846 8270, formaldehyde by Method SW-846 8315, lead by Method SW-846 7421, mercury by Method SW-846 7470, and cadmium, copper, and zinc by Method SW-846 6010. Metals analysis consisted of the total (unfiltered) and dissolved (filtered) fraction. Dissolved metals samples were field-filtered using a 0.45-micron filter prior to filling the appropriate sample bottle. The ground water sample recollected from Monitoring Well MW-5 was submitted for analysis of TCL SVOCs.

2.4.2 Quality Control Samples

In addition to the ground water samples collected to characterize the Site, four ground water related QC samples were collected (Table 1). An equipment blank was prepared by pouring laboratory-supplied deionized water through a bailer into an appropriate laboratory-prepared sample bottle. The equipment blank sample was analyzed for the full parameter suite. A duplicate ground water sample was collected from MW-4 during the August 1993 sampling event, and a duplicate was collected from Monitoring Well MW-5 during the June 1994 re-sampling event. A trip blank was prepared at the analytical laboratory and accompanied the sample bottles during all phases of shipment.

2.5 SINGLE WELL TESTING

Estimates of aquifer (i.e., the shallow water-bearing zone) hydraulic conductivity were calculated by performing rising-head slug tests at each monitoring well. Slug testing involved the relatively instantaneous removal of a known volume (slug) of ground water from the monitoring wells and recording water-level recovery over time. Prior to performing the slug tests, static ground water levels were measured. A pressure transducer was placed in the monitoring well approximately one-half foot from the bottom of the well. The pressure transducer was connected to a Hermit Environmental Data Logger Model SE1000B and the amount of hydraulic head on the pressure transducer was read by the data logger. A dedicated stainless steel bailer with polyethylene cord was lowered into the water column within the monitoring well. The hydraulic head on the pressure transducer was again read to ensure that the slug test was being initiated under static conditions. The full bailer was then quickly removed from the monitoring well. Instantaneously, the recording of water-level displacement was performed by the data logger. The slug tests were concluded when the water level recovered at least 90 percent of the initial drawdown.

Slug test data were field-screened to ensure the validity of the test prior to completing the field task. The slug test data were reduced using the Bouwer and Rice method,[7] which is an applicable method for the configuration of the monitoring wells (i.e., partially penetrating

[7] Bouwer, H. and R.C. Rice, 1976, "A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells," Water Resources Research, Vol. 12, No.3. Bouwer, H., 1989, "The Bouwer and Rice Slug Test - An Update," Ground Water, Vol. 27, No. 3.

wells in an unconfined aquifer). The raw slug test data and calculation of the hydraulic conductivity are presented in Appendix B.

2.6 WASTE DISPOSAL

Remcor subcontracted Pollution Solutions of Vermont, Inc., of Williston, Vermont, to transport and dispose of waste generated during the implementation of the SSA. Waste types generated included water (decontamination, development, and purge), soil from borings, polyethylene sheeting (temporary decontamination pad), and debris (glass jars, latex gloves, etc.). Waste disposal documentation is presented in Appendix C.

3.0 INVESTIGATION RESULTS

3.1 SUBSURFACE CONDITIONS

A discussion of the geologic and hydrogeologic conditions encountered during monitoring well and soil borings, and during completion of single-well testing at the Site, is presented in the following sections.

3.1.1 Geology

Soils encountered in borings advanced at the Site consisted of sandy silt, silty sand, silty sand and gravel, and fill material. In general, the sandy silt occurred in the upper portion (0 to 4 ft-bgs) of the borings. The sandy silt was usually stiff, brown, dry to damp, and contained some metamorphic rock fragments and trace organic material. Silt extended to a greater depth (12 ft-bgs) in soil boring SB-13. The silt was stiff to very stiff, greenish brown, damp to saturated, and contained some sand and trace amounts of rock fragments and clay. At boring locations other than MW-1, the sandy silt is a fluvial/glaciofluvial deposit. The sandy silt encountered in the boring for monitoring well MW-1 is a colluvial deposit and is present to a depth of 10 ft-bgs.

Fill was encountered in the upper portion of some of the borings. Fill was present in the borings located on the berm of the burn pit (SB-2, SB-3, and MW-4) and was probably placed during the excavation of the burn pit. Fill encountered in borings MW-3 and SB-9 was boiler ash and cinder. The drainage swale is believed to contain some fill. This was evidenced by plastic debris present in a split-barrel sample collected 4 ft-bgs in soil boring

SB-8. Fill encountered in soil boring SB-12, near the former concrete settling vault, had a very strong sewage odor. This area is suspected to have been a former septic leach field.

In many of the borings, a fine-to-medium silty sand was encountered below the sandy silt and fill horizons. The silty sand was generally 2 to 4 feet thick, medium dense to dense, contained some gravel, and varied from damp to saturated.

The predominant soil type encountered in the lower portion (6 to 20 ft-bgs) of the borings was a silty sand and gravel. This soil was deposited by glaciofluvial mechanisms. The silty sand and gravel was characteristically medium dense to very dense and varied from fine- to coarse-grained. This horizon contained the first water-bearing zone at the Site. Bedrock was encountered in the boring for monitoring well MW-1 at 23 ft-bgs. Bedrock consists of a greenish-gray micaceous schist.

Logs for each boring are presented in Appendix A. A generalized cross section of the Site encompassing the toe of slope, drainage swale, and burn pit is depicted in Figure 3.

3.1.2 Hydrogeology

The shallow unconsolidated aquifer at the Site consists of silty sand and gravel. The shallow aquifer is unconfined and the top of the water table was encountered at depths between 8 to 15 ft-bgs. Ground water levels were measured on four separate occasions (August 7 and 23 and September 15 and 29, 1993) in Site monitoring wells and are presented in Table 3. A potentiometric surface map for August 23, 1993 (date of ground water sampling) is presented

as Figure 4. The ground water flow direction is from north to south. The ground water flow direction mimics the flow direction of the White River. A surface water elevation was obtained in the White River at a bridge near the Site (White River Reference Point 1 [WRRP 1]) (Figure 4). Surface water elevations of the White River are consistently within 0.14 foot of the ground water elevations measured in monitoring well MW-3 (Table 3).

Single-well testing (rising-head slug tests) was conducted on each Site monitoring well to estimate the hydraulic conductivity of the shallow aquifer. The slug test data and the hydraulic conductivity calculations are included in Appendix B.

A summary of hydraulic conductivities is presented in Table 4. An assumed saturated thickness of 50 feet for the shallow aquifer was used to calculate the hydraulic conductivity. The hydraulic conductivities ranged from 8.7 to 10^{-4} centimeters per second (cm/sec) at monitoring well MW-1 to 1.4×10^{-2} cm/sec at monitoring well MW-3. An average hydraulic conductivity of 6.1×10^{-3} cm/sec was estimated for the shallow aquifer.

Ground water velocity was approximated using the average hydraulic conductivity, a measured hydraulic gradient of 8.0×10^{-3} feet per feet (ft/ft), and an estimated porosity of 30 percent for a sand and gravel aquifer. The flow velocity was calculated to be approximately 170 feet per year (ft/yr) (Appendix B).

The two supply wells sampled (Site main well and Deering Service Center well) are located in the bedrock aquifer. Logs for these wells were not available. Information provided by

the drilling company that installed these wells indicated that the wells are approximately 180 feet deep. Yields are reportedly 5 to 10 gpm.

3.2 SOIL ANALYSES

A total of 23 soil samples were collected from the 20 monitoring well/soil boring boreholes that were advanced during the SSA. The analytical suite for each soil sample is presented in Table 1, and a summary of detected parameters is presented in Table 5. Soil sample analytical reports (prepared by Ceimic) are included in Appendix D.

3.2.1 Volatile Organic Compounds

VOCs detected in soil samples include acetone, 1,1,1-trichloroethane (1,1,1-TCA), 4-methyl-2-pentanone, 2-hexanone, and chlorobenzene (Table 5). Acetone was detected in 13 of 18 soil samples analyzed and concentration ranged from 17 micrograms per kilogram (μg/kg) to 22,000 μg/kg. The acetone detected in soil sample WY-MW04-0001 is suspect due to the presence of acetone in the associated trip blank (WY-TB-0805) and the sample equipment rinsate blank (WY-EB-SPOON) at concentrations of 24 and 66 micrograms per liter (μg/ℓ), respectively. Acetone detection in other soil samples are not suspect because acetone was not detected in the laboratory method blanks. The compound 1,1,1-TCA was detected in soil samples WY-SB02-1012 and WY-SB04-0406 at very low concentrations of 8 and 9 μg/kg, respectively. The compounds 4-methyl-2-pentanone, 2-hexanone, and chlorobenzene were detected in soil sample WY-SB05-0810. This sample exhibited some light gray staining and had a fuel-like odor. Staining and associated odor were not observed in any other soil sample collected at the Site. No other VOCs were detected in the soil samples analyzed.

3.2.2 Semivolatile Organic Compounds

SVOCs were detected in soil samples WY-MW02-0001, WY-MW03-0001, WY-SB03-1416, WY-SB07-1012, and WY-SB05-0810 (Table 5). Pyrene was detected in soil sample WY-MW02-0001 at a concentration of 680 μg/kg. Soil sample WY-MW03-0001 had a di-n-butylphthalate concentration of 2,300 μg/kg. Chrysene was detected in soil sample WY-SB03-1416 at a concentration of 650 μg/kg. The compounds nitrobenzene (460 μg/kg), 2-methyl-naphthalene (1,700 μg/kg), and bis(2-ethylhexyl)phthalate (820 μg/kg) were detected in soil sample WY-SB05-0810. Bis(2-ethylhexyl)phthalate was also detected in soil sample WY-SB07-1012 at 400 μg/kg. No other SVOCs were detected in the soil samples analyzed.

3.2.3 Metals

Soil sample metals analysis included copper, lead, mercury, and zinc. Each of the metals analyzed is summarized individually below:

- Copper concentrations ranged from 19 milligrams per kilogram (mg/kg) (WY-MW03-0406) to 97 mg/kg (WY-MW03-0001).
- Concentrations of lead varied from 5 mg/kg in soil samples WY-SB01-0102 and WY-SB02-1012 to 190 mg/kg in soil sample WY-MW04-0001D (near the burn pit).
- Mercury was not detected in any soil sample.
- Zinc concentrations varied widely ranging from 32 mg/kg (WY-SB03-1416) to 512 mg/kg (WY-MW03-0001).

3.2.4 Formaldehyde

Formaldehyde was detected in 16 of 21 soil samples collected for the SSA (Table 5). Concentrations ranged from 2.6 micrograms per gram ($\mu g/g$) (WY-MW01-1618) to 70 $\mu g/g$ (WY-SB11-0608). Formaldehyde was detected in each soil sample collected in or near the burn pit and drainage swale.

3.3 GROUND WATER ANALYSES

The ground water analyses of samples from the six monitoring wells and the two supply wells are summarized in the following sections. A list of detected parameters is presented in Table 6. Ground water sample analytical reports (prepared by Ceimic) are included in Appendix E.

3.3.1 Volatile Organic Compounds

VOCs were not detected in any of the ground water samples collected from the site monitoring wells or the main site supply well (WY-CHP-0823). The compounds toluene and total xylene were detected in the ground water sample collected from the Deering Service Center supply well (WY-DSC-0823) at a concentration of 5 and 23 $\mu g/\ell$, respectively (Table 6). The detection of these two compounds is consistent with the VDEC sampling results for the investigation of a petroleum release at this automotive service center. The VDEC sampling results from the latest two rounds of monitoring are presented in Appendix F.

3.3.2 Semivolatile Organic Compounds

SVOCs were not detected in the ground water samples analyzed. The data for acid extractable compounds for sample WY-MW05-0823 was rejected by Remcor during validation, due to extremely low surrogate recoveries for this sample (Appendix E). SVOCs were not detected in the ground water samples (WY-MW05-0694 and WY-MW05-0694D) recollected from Monitoring Well MW-5 during June 1994. All surrogate recoveries were in acceptable quality control limits for these samples. The analytical report for the samples recollected from MW-5 is included in Appendix E.

3.3.3 Metals

Ground water metals analysis included total and dissolved cadmium, copper, lead, mercury, and zinc. Results for each of the metals analyzed is summarized individually below:

- Total and dissolved cadmium were not detected in any ground water samples.
- Total copper was detected in each of the ground water samples collected from the Site monitoring wells at concentrations ranging from 0.07 milligram per liter (mg/ℓ) (WY-MW01-0823) to 0.35 mg/ℓ (WY-MW05-0823). Total copper was not detected in ground water samples collected from either supply well (WY-CHP-0823 and WY-DSC-0823). Dissolved copper was detected in ground water samples WY-MW03-0823 and WY-MW05-0823 at concentrations of 0.07 and 0.02 mg/ℓ, respectively. Dissolved copper was not detected in any other ground water sample.
- Concentrations of total lead ranged from 0.024 mg/ℓ (WY-MW01-0823) to 0.163 mg/ℓ (WY-MW06-0823) in samples collected from monitoring wells. Total lead was not detected in ground water samples collected from the supply wells. Dissolved lead was detected in only one ground water sample (WY-MW03-0823) at a concentration of 0.006 mg/ℓ.
- Total and dissolved mercury was not detected in any ground water sample.
- Total zinc concentrations ranged from 0.06 to 0.20 mg/ℓ (WY-MW03-0823) in samples collected from Site monitoring wells. Total zinc was detected in the

main site supply well (WY-CHP-0823) at a concentration of 0.05 mg/ℓ. Two ground water samples from site monitoring wells (WY-MW03-0823 and WY-MW06-0823) had dissolved zinc concentrations of 0.01 mg/ℓ. Dissolved zinc was detected in the main supply well at a concentration of 0.04 mg/ℓ.

3.3.4 Formaldehyde

Formaldehyde was detected in two ground water samples collected from site monitoring wells (Table 6). Ground water samples WY-MW05-0823 and WY-MW06-0823 had formaldehyde concentrations of 1.7 and 0.51 mg/ℓ, respectively. Formaldehyde was not detected in ground water samples collected from other site monitoring wells or the two supply wells.

4.0 CONCLUSIONS

The following conclusions were developed based on the data collected during the SSA and Remcor's review of existing Site data. Where available and applicable, soil action levels provided in proposed Title 40 Code of Federal Regulations (CFR), Part 264, Subpart S[8] (Subpart S) were compared to Site soil data. Subpart S values reflect a 1×10^{-6} risk level, which is protective of human health. Action levels for the metals detected (lead, zinc, and copper) have not been identified by Subpart S; therefore, cleanup levels for the Environmental Cleanup Responsibility Act[9] (ECRA) established by the State of New Jersey, were used for comparion. Maximum contaminant levels (MCLs) developed to the Safe Drinking Water Act[10] were compared with ground water data where available. A table[11] presenting risk-based concentrations developed by the U.S. Environmental Protection Agency (EPA), Region III, was used to evaluate potential health risks (if any) attributable to detected constituents not referenced in Subpart S or as an MCL. The concentrations referenced in the EPA table are based on an incremental lifetime cancer risk of 10^{-6} under oral ingestion and/or inhalation exposure scenarios. The highest concentration level for detected constituents compared to these regulatory limits is presented in Table 7.

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[8] Title 40, Code of Federal Regulations, Part 264, proposed Subpart S (Federal Register 30873, Vol. 55, No. 145, July 27, 1990).

[9] Environmental Cleanup Responsibility Act (New Jersey Administrative Code 7:26B, August 7, 1989).

[10] Title 40, Code of Federal Regulations, Parts 141-148.

[11] U.S. Environmental Protection Agency, Region III, July 9, 1993, "Risk-Based Concentration Table, Third Quarter," Technical Support Section (3HW13).

Site soils appear to have been impacted by previous Site activities. An evaluation of the detected constituents as they relate to the above-referenced regulatory values is presented below:

- Site soils contain low concentrations of acetone. The highest concentrations of acetone were detected in soils near the burn pit. Soil sample WY-MW04-1416 had an acetone concentration of 22,000 μg/kg (Table 5). This concentration is well below the Subpart S action level of 8,000,000 μg/kg for acetone (Table 7).

- The maximum detected concentration of 1,1,1-TCA in soil samples was only 9 μg/kg. The Subpart S action level for 1,1,1-TCA in soil is 7,000,000 μg/kg.

- Detection of VOCs was limited to sample WY-SB05-0810 from Boring SB-5 (4-methyl-2-pentanone, 2-hexanone, and chlorobenzene). This was the only sample collected that exhibited staining. The maximum detected chlorobenzene and 4-methyl-2-pentanone concentrations of 22,000 and 1,200,000 μg/kg are below the Subpart S action levels of 2,000,000 and 4,000,000 μg/kg, respectively. No EPA action levels for 2-hexanone in soils have been identified.

- Low concentrations of six SVOCs were detected in the soil samples. Maximum detected concentrations include: nitrobenzene (460 μg/kg), bis(2-ethylhexyl) phthalate (820 μg/kg), phenanthrene (630 μg/kg), pyrene (680 μg/kg), chrysene (650 μg/kg), and 2-methylnaphthalene (1,700 μg/kg). Subpart S action levels for nitrobenzene and bis(2-ethylhexyl)phthalate in soil are 40,000 and 50,000 μg/kg, respectively. No EPA action levels for phenanthrene, pyrene, chrysene, and 2-methylnaphthalene in soils have been identified.

- Lead, zinc, and copper concentrations were detected primarily in near-surface soils. In the area of distressed vegetation (Figure 2), these metals are believed to be due to the disposal of boiler ash and cinders. The maximum soil concentrations detected for lead (190 mg/kg), zinc (512 mg/kg), and copper (97 mg/kg) are compared to the ECRA levels established by the State of New Jersey since Subpart S action levels have not been identified. ECRA cleanup levels are 600 mg/kg for lead, 1,500 mg/kg for zinc, and 600 mg/kg for copper. The concentrations detected at the Site are below ECRA cleanup criteria.

- Formaldehyde is present in most of the soil samples collected. The highest concentrations of formaldehyde were detected in soil samples collected from the drainage swale and burn pit. The highest concentration of formaldehyde detected was 70 μg/g. No contaminant levels for formaldehyde are currently specified by the State of Vermont, EPA Region I, or in Subpart S. The formaldehyde concentrations in soil at the Site are well below the risk-based[9] concentrations for

formaldehyde in soil of 16,000 and 200,000 mg/kg for residential and commercial/industrial soil, respectively.

Site activities have had a minimal impact on the quality of ground water in the shallow water-bearing zone and no apparent adverse impact on the bedrock aquifer. Formaldehyde was detected in samples WY-MW05-0823 and WY-MW06-0823 at concentrations of 1.7 and 0.51 mg/ℓ, respectively. These concentrations are below the risk-based[9] concentration of 7.3 mg/ℓ for formaldehyde in tap water (Table 7). In addition, copper, lead, and zinc were detected in samples screened in the shallow water-bearing zone. Total and dissolved copper, lead, and zinc were detected at maximum concentrations of 0.350 and 0.020 mg/ℓ, 0.163 and 0.006 mg/ℓ, and 0.150 and 0.040 mg/ℓ, respectively. Total metal concentrations are due in part to the presence of silt in the ground water samples collected from the monitoring wells. Zinc and copper have secondary MCLs of 5 and 1 mg/ℓ, respectively, which are well above their detected concentrations. Lead has an "at the tap" drinking water standard (by EPA) of 0.015 mg/ℓ and a MCL of 0.05 mg/ℓ. Total lead concentrations are believed to be due mainly to turbid samples. Dissolved lead in Site ground water sample concentrations are below its corresponding MCL. The presence of lead in the Site's shallow water-bearing zone has not affected (based on the available data) the bedrock aquifer that is used as a ground water supply source and was monitored via the Site main well and the Deering Service Center well.[12] No formaldehyde, VOCs, or SVOCs were detected in the Site main well. Dissolved zinc was detected in the Site main well at a concentration of 0.04 mg/ℓ, well below

[12] These bedrock wells are the nearest identified potential ground water receptors to the Site.

the secondary MCL of 5 mg/ℓ. Toluene and xylene were detected in the ground water sample collected from the Deering Service Center well at concentrations below their respective MCLs. Since toluene and xylene have not been detected in Site monitoring wells or the Site main well, they are not attributed to Site activities, but possibly to a documented petroleum release at the Deering Service Center. No formaldehyde, SVOCs, or dissolved metals were detected in the Deering Service Center well.

5.0 RECOMMENDATIONS

The concentrations of detected constituents in both soil and ground water are below current applicable and/or referenced action levels (which are protective of human health). There is no technical basis, therefore, for further evaluation and/or remediation of Site soils and/or ground water. On this basis, Remcor recommends that no further environmental evaluation or remediation actions need to be taken at the Site relative to past Site activities.

6.0 CLOSING

Remcor trusts that the documentation of the SSA presented herein is in accordance with the requirements and expectations of Weyerhaeuser. We have enjoyed this opportunity to work with Weyerhaeuser and look forward to assisting you in the future.

Respectfully submitted,

Kurt P. Paschl
Assistant Project Geologist

Lawrence M. Martin, P.E.
Senior Project Manager

TABLE 1
SAMPLE COLLECTION/ANALYSES SUMMARY

WEYERHAEUSER COMPANY
CHESAPEAKE HARDWOOD PRODUCTS FACILITY
HANCOCK, VERMONT

REMCOR, INC.
PROJECT NO. 93009
AUGUST 22, 1994

SAMPLE LOCATION	SAMPLE IDENTIFICATION	SAMPLE DEPTH	COLLECTION DATE	COLLECTION TIME	ANALYTICAL PARAMETERS						
					TCL VOCs	TCL SVOCs	Formaldehyde	Copper	Lead	Mercury	Zinc
Soil Samples											
MW-1	WY-MW01-0001	0 - 1'	08/02/93	1405	X	X	X	X	X	X	X
	WY-MW01-1618	16' - 18'	08/03/93	0755	X	X	X	X	X	X	X
MW-2	WY-MW02-0001	0 - 1'	08/03/93	1100	X	X	X	X	X	X	X
	WY-MW02-1214	12' - 14'	08/03/93	1155	X	X	X	X	X	X	X
MW-3	WY-MW03-0001	0 - 1'	08/03/93	1425	X	X	X	X	X	X	X
	WY-MW03-0406	4' - 6'	08/03/93	1445	X	X	X	X	X	X	X
MW-4	WY-MW04-0001	0 - 1'	08/04/93	1500	X	X	X	X	X	X	X
	WY-MW04-1416	14' - 16'	08/05/93	0830	X	X	X	X	X	X	X
MW-5	WY-MW05-0810	8' - 10'	08/04/93	1120	-	X	X	-	-	-	-
SB-1	WY-SB01-0102	1' - 2'	08/05/93	1150	-	X	X	X	X	X	X
SB-2	WY-SB02-1012	10' - 12'	08/05/93	1105	X	X	X	X	X	X	X
SB-3	WY-SB03-1416	14' - 16'	08/05/93	1750	X	X	X	X	X	X	X
SB-4	WY-SB04-0001	0 - 1'	08/05/93	1345	-	-	X	-	-	-	-
	WY-SB04-0406	4' - 6'	08/05/93	1400	X	-	-	-	-	-	-
	WY-SB04-1214	12' - 14'	08/05/93	1450	-	-	X	-	-	-	-
SB-5	WY-SB05-0810	8' - 10'	08/06/93	1835	X	X	X	-	-	-	-
SB-7	WY-SB07-1012	10' - 12'	08/05/93	1950	X	X	X	-	-	-	-
SB-8	WY-SB08-0810	8' - 10'	08/06/93	1400	X	X	X	-	-	-	-
SB-9	WY-SB09-0608	6' - 8'	08/06/93	1730	X	X	X	-	-	-	-
SB-10	WY-SB10-1012	10' - 12'	08/06/93	1535	X	-	-	-	-	-	-
SB-11	WY-SB11-0608	6' - 8'	08/06/93	1620	-	X	X	-	-	-	-
SB-14	WY-SB14-1012	10' - 12'	08/07/93	0815	X	X	X	-	-	-	-
Soil QC Samples											
Duplicate/MW-4	WY-MW04-0001D	0 - 1'	08/04/93	1500	X	X	X	X	X	X	X
Equipment Blank	WY-EB-SPOON	--	08/04/93	1630	X	X	X	X	X	X	X
Trip Blank	WY-TB-0804	--	--	--	X	-	X	-	-	-	-
Trip Blank	WY-TB-0805	--	--	--	X	-	X	-	-	-	-
Trip Blank	WY-TB-0806	--	--	--	X	-	X	-	-	-	-
Trip Blank	WY-TB-0807	--	--	--	X	-	X	-	-	-	-

FILE NAME: 19104

TABLE 1
SAMPLE COLLECTION/ANALYSES SUMMARY

WEYERHAEUSER COMPANY
CHESAPEAKE HARDWOOD PRODUCTS FACILITY
HANCOCK, VERMONT

REMCOR, INC.
PROJECT NO. 93009
AUGUST 22, 1994

SAMPLE LOCATION	SAMPLE IDENTIFICATION	COLLECTION DATE	COLLECTION TIME	ANALYTICAL PARAMETERS							
				TCL VOCs	TCL SVOCs	Formaldehyde	Cadmium (1)	Copper (1)	Lead (1)	Mercury (1)	Zinc (1)
Ground Water Samples											
MW-1	WY-MW01-0823	08/23/93	1145	X	X	X	X	X	X	X	X
MW-2	WY-MW02-0823	08/23/93	1205	X	X	X	X	X	X	X	X
MW-3	WY-MW03-0823	08/23/93	1220	X	X	X	X	X	X	X	X
MW-4	WY-MW04-0823	08/23/93	1250	X	X	X	X	X	X	X	X
MW-5	WY-MW05-0823	08/23/93	1310	X	X	X	X	X	X	X	X
MW-6	WY-MW06-0823	08/23/93	1340	X	X	X	X	X	X	X	X
CHP Well	WY-CHP-0823	08/23/93	1500	X	X	X	X	X	X	X	X
Deering Service Center	WY-DSC-0823	08/23/93	1530	X	X	X	X	X	X	X	X
MW-5	WY-MW05-0694	06/24/94	0950	--	X	--	--	--	--	--	--
Ground Water QC Samples											
Duplicate/MW-4	WY-MW04-0823D	08/23/93	1250	X	X	X	X	X	X	X	X
Equipment Blank	WY-EB-0823	08/23/93	1400	X	X	X	X	X	X	X	X
Trip Blank	WY-TB-0823	--	--	X	-	X	-	-	-	-	-
Duplicate/MW-5	WY-MW05-0694D	06/24/94	0950	--	X	--	--	--	--	--	--

NOTE:
(1) Ground water samples were submitted for analysis of total (unfiltered) and dissolved (filtered) metals.

FILE NAME: 19104

TABLE 2
MONITORING WELL CONSTRUCTION DETAILS SUMMARY

WEYERHAEUSER COMPANY
CHESAPEAKE HARDWOOD PRODUCTS FACILITY
HANCOCK, VERMONT

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

MONITORING WELL	DATE OF CONSTRUCTION	BOREHOLE DIAMETER (INCHES)	CASING DIAMETER (INCHES)	TOTAL DEPTH OF BORING (FT-BGS) [1]	SCREENED INTERVAL (FT-BGS)	SAND PACK INTERVAL (FT-BGS)	BENTONITE SEAL INTERVAL (FT-BGS)	GROUND SURFACE ELEVATION (FT-MSL) [2]	TOC ELEVATION (FT-MSL)
MW-1	08/03/93	12.0	2	23.2	13.2 - 23.2	12.0 - 23.2	10.2 - 12.0	901.40	904.25
MW-2	08/03/93	12.0	2	18.0	8.0 - 18.0	6.9 - 18.0	5.0 - 6.9	894.60	896.59
MW-3	08/03/93	12.0	2	16.0	6.0 - 16.0	4.9 - 16.0	3.0 - 4.9	887.40	890.07
MW-4	08/05/93	12.0	2	20.0	10.0 - 20.0	6.5 - 20.0	4.5 - 6.5	890.90	893.48
MW-5	08/04/93	12.0	2	13.5	3.5 - 13.5	3.0 - 13.5	1.6 - 3.0	883.80	886.80
MW-6	08/03/93	12.0	2	15.0	4.0 - 14.0	3.5 - 15.0	2.0 - 3.5	886.30	889.54

NOTES: [1] FT-BGS INDICATES FEET BELOW GROUND SURFACE
[2] FT-MSL INDICATES FEET ABOVE MEAN SEA LEVEL

FILE/18836

TABLE 3
GROUND WATER ELEVATIONS SUMMARY

REMCOR, INC.
PROJECT NO. 93009
AUGUST 22, 1994

WEYERHAEUSER COMPANY
CHESAPEAKE HARDWOOD PRODUCTS FACILITY
HANCOCK, VERMONT

MONITORING WELL/ REFERENCE POINT IDENTIFICATION	MEASURING POINT ELEVATION (FT–MSL)[1]	DEPTH TO WATER LEVEL (FEET)	WATER LEVEL ELEVATION (FT–MSL)	DEPTH TO WATER LEVEL (FEET)	WATER LEVEL ELEVATION (FT–MSL)	DEPTH TO WATER LEVEL (FEET)	WATER LEVEL ELEVATION (FT–MSL)	DEPTH TO WATER LEVEL (FEET)	WATER LEVEL ELEVATION (FT–MSL)	DEPTH TO WATER LEVEL (FEET)	WATER LEVEL ELEVATION (FT–MSL)
DATE:		06/07/93		06/23/93		09/15/93		09/29/93		06/24/94	
MW–1	904.25	16.67	887.58	17.02	887.23	17.23	887.02	17.14	887.11	12.79	891.46
MW–2	896.59	15.61	880.98	15.43	881.16	15.60	880.99	15.18	881.41	14.56	882.03
MW–3	890.07	12.13	877.94	11.87	878.20	11.95	878.12	11.12	878.95	11.60	878.47
MW–4	893.48	17.25	876.23	16.43	877.05	16.86	876.62	15.18	878.30	15.77	877.71
MW–5	886.80	10.87	875.93	10.38	876.42	10.57	876.23	9.48	877.32	9.88	876.92
MW–6	889.54	12.23	877.31	11.96	877.58	12.02	877.52	11.16	878.38	11.53	878.01
W.R.R.P. 1	891.85	13.90	877.95	13.70	878.15	13.77	878.08	13.04	878.81	13.49	878.36

NOTES: [1] FT–MSL INDICATES FEET ABOVE MEAN SEA LEVEL

FILE/18274

TABLE 4
HYDRAULIC CONDUCTIVITY CALCULATIONS SUMMARY

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

WEYERHAEUSER COMPANY
CHESAPEAKE HARDWOOD PRODUCTS FACILITY
HANCOCK, VERMONT

MONITORING WELL NUMBER	ASSUMED SATURATED THICKNESS (FEET)	BOUWER AND RICE METHOD HYDRAULIC CONDUCTIVITY (K) (cm/s) (1)
MW–1	50	8.7×10^{-4}
MW–2	50	7.6×10^{-3}
MW–3	50	1.4×10^{-2}
MW–4	50	5.8×10^{-3}
MW–5	50	5.3×10^{-3}
MW–6	50	3.3×10^{-3}
AVERAGE	50	6.1×10^{-3}

NOTE:

(1) "cm/s" – CENTIMETER PER SECOND

FILE NAME: 18767

TABLE 5
SOIL ANALYSES SUMMARY

WEYERHAEUSER COMPANY
CHESAPEAKE HARDWOOD PRODUCT FACILITY
HANCOCK, VERMONT

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

VOLATILE ORGANIC COMPOUNDS

REMCOR SAMPLE NO.:	WY-MW01-0001	WY-MW01-1618	WY-MW02-0001	WY-MW02-1214	WY-MW03-0001	WY-MW03-0406	WY-MW04-0001	WY-MW04-0001D
CEIMIC NO.:	930506	930507-02	930507-03	930507-04	930507-05	930507-06	930507-10	930507-11
SAMPLE LOCATION:	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	MW-4	MW-4
SAMPLE DEPTH:	0.0 - 1.0'	16.0' - 18.0'	0.0 - 1.0'	12.0' - 14.0'	0.0 - 1.0'	4.0' - 6.0'	0.0 - 1.0'	0.0 - 1.0'
DATE:	06/02/93	06/03/93	06/03/93	06/03/93	06/03/93	06/03/93	06/04/93	06/04/93
UNITS:	(µg/kg)[1]	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
TCL VOCs								
ACETONE	--[2]	20	--	310	280	72	30	--
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--	--

REMCOR SAMPLE NO.:	WY-MW04-1416	WY-SB02-1012	WY-SB03-1416	WY-SB04-0406	WY-SB07-1012	WY-SB05-0810	WY-SB06-0810	WY-SB09-0606
CEIMIC NO.:	930507-13	930507-15	930507-16	930507-18	930507-20	930507-22	930507-23	930507-24
SAMPLE LOCATION:	MW-4	SB-2	SB-3	SB-4	SB-7	SB-5	SB-6	SB-9
SAMPLE DEPTH:	14.0' - 16.0'	10.0' - 12.0'	14.0' - 16.0'	4.0' - 6.0'	10.0' - 12.0'	8.0' - 10.0'	8.0' - 10.0'	6.0' - 8.0'
DATE:	06/06/93	06/06/93	06/06/93	06/06/93	06/06/93	06/06/93	06/06/93	06/06/93
UNITS:	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)	(µg/kg)
TCL VOCs								
ACETONE	22,000	6,300	23	240	30	--	--	18
1,1,1-TRICHLOROETHANE	--	8	--	9	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	1,200,000	--	--
2-HEXANONE	--	--	--	--	--	240,000	--	--
CHLOROBENZENE	--	--	--	--	--	22,000	--	--

REMCOR SAMPLE NO.:	WY-SB10-1012	WY-SB14-1012	WY-TB-0804	WY-TB-0805	WY-TB-0806	WY-TB-0807	WY-EB-SPOON
CEIMIC NO.:	930507-25	930507-27	930507-08	930507-12	930507-21	930507-26	930507-09
SAMPLE LOCATION:	SB-10	SB-14	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLANK	EQUIP. BLANK
SAMPLE DEPTH:	10.0' - 12.0'	10.0' - 12.0'	NA	NA	NA	NA	NA
DATE:	06/06/93	06/07/93	06/04/93	06/05/93	06/06/93	06/07/93	06/04/93
UNITS:	(µg/kg)	(µg/kg)	(µg/L)[3]	(µg/L)	(µg/L)	(µg/L)	(µg/L)
TCL VOCs							
ACETONE	17	28	--	24	--	--	66
1,1,1-TRICHLOROETHANE	--	--	--	--	--	--	--
4-METHYL-2-PENTANONE	--	--	--	--	--	--	--
2-HEXANONE	--	--	--	--	--	--	--
CHLOROBENZENE	--	--	--	--	--	--	--

NOTES: [1] µg/kg INDICATES MICROGRAMS PER KILOGRAM
[2] -- INDICATES NOT DETECTED AT THE METHOD DETECTION LIMIT
[3] µg/L INDICATES MICROGRAMS PER LITER

TABLE 5 (CONTINUED)
SOIL ANALYSES SUMMARY
TOTAL METALS

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

REMCOR SAMPLE NO.:	WY-MW01-0001	WY-MW01-1618	WY-MW02-0001	WY-MW02-1214	WY-MW03-0001	WY-MW03-0406	WY-MW04-0001
CEIMIC NO.:	930507-01	930507-02	930507-03	930507-04	930507-05	930507-06	930507-10
SAMPLE LOCATION:	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	MW-4
SAMPLE DEPTH:	0.0 - 1.0'	16.0' - 18.0'	0.0 - 1.0'	12.0' - 14.0'	0.0 - 1.0'	4.0' - 6.0'	0.0 - 1.0'
DATE:	08/02/93	08/03/93	08/03/93	08/03/93	08/03/93	08/03/93	08/04/93
UNITS:	(mg/kg)[1]	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
TOTAL METALS							
COPPER	49	35	51	66	97	19	44
LEAD	7	6	41	8	94	6	110
ZINC	92	30	96	43	512	56	162

REMCOR SAMPLE NO.:	WY-MW04-0001D	WY-MW04-1416	WY-SB01-0102	WY-SB02-1012	WY-SB03-1416	WY-EB-SPOON
CEIMIC NO.:	930507-11	930507-13	930507-14	930507-15	930507-16	930507-09
SAMPLE LOCATION:	MW-4	MW-4	SB-1	SB-2	SB-3	EQUIP. BLANK
SAMPLE DEPTH:	0.0 - 1.0'	14.0' - 16.0'	1.0' - 2.0'	10.0' - 12.0'	14.0' - 16.0'	NA
DATE:	08/04/93	08/05/93	08/05/93	08/05/93	08/05/93	08/04/93
UNITS:	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/L)[2]
TOTAL METALS						
COPPER	58	29	41	40	33	--[3]
LEAD	190	10	5	5	9	--
ZINC	220	38	280	64	32	--

NOTES: [1] mg/kg INDICATES MILLIGRAMS PER KILOGRAM
[2] mg/L INDICATES MILLIGRAMS PER LITER
[3] -- INDICATES NOT DETECTED AT THE METHOD DETECTION LIMIT

FILE/19107

TABLE 5 (CONTINUED)
SOIL ANALYSES SUMMARY
SEMIVOLATILE ORGANIC COMPOUNDS

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

REMCOR SAMPLE NO.:	WY-MW01-0001	WY-MW01-1618	WY-MW02-0001	WY-MW02-1214	WY-MW03-0001	WY-MW03-0406	WY-MW05-0810
CEIMIC NO.:	930507-01	930507-02	930507-03	930507-04	930507-05	930507-06	930507-07
SAMPLE LOCATION:	MW-1	MW-1	MW-2	MW-2	MW-3	MW-3	MW-5
SAMPLE DEPTH:	0.0 - 1.0'	16.0' - 18.0'	0.0 - 1.0'	12.0' - 14.0'	0.0 - 1.0'	4.0' - 6.0'	8.0' - 10.0'
DATE:	06/02/93	06/03/93	06/03/93	06/03/93	06/03/93	06/04/93	06/04/93
UNITS:	µg/kg[1]	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
TCL SVOCs							
NITROBENZENE	--[2]	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--
PHENANTHRENE	--	--	630	--	--	--	--
DI-N-BUTYLPHTHALATE	--	--	--	--	2300	--	--
PYRENE	--	--	680	--	--	--	--
CHRYSENE	--	--	--	--	--	--	--
BIS (2-ETHYLHEXYL) PHTHALATE	--	--	--	--	--	--	--

REMCOR SAMPLE NO.:	WY-MW04-0001	WY-MW04-0001D	WY-MW04-1416	WY-SB01-0102	WY-SB02-1012	WY-SB03-1416	WY-SB07-1012
CEIMIC NO.:	930507-10	930507-11	930507-13	930507-14	930507-15	930507-16	930507-20
SAMPLE LOCATION:	MW-4	MW-4	MW-4	SB-1	SB-2	SB-3	SB-7
SAMPLE DEPTH:	0.0 - 1.0'	0.0 - 1.0'	14.0' - 16.0'	1.0' - 2.0'	10.0' - 12.0'	14.0' - 16.0'	10.0' - 12.0'
DATE:	06/04/93	06/04/93	06/05/93	06/03/93	06/03/93	06/04/93	06/04/93
UNITS:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
TCL SVOCs							
NITROBENZENE	--	--	--	--	--	--	--
2-METHYLNAPHTHALENE	--	--	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--	--
DI-N-BUTYLPHTHALATE	--	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	650	--
BIS (2-ETHYLHEXYL) PHTHALATE	--	--	--	--	--	--	400

REMCOR SAMPLE NO.:	WY-SB05-0810	WY-SB08-0810	WY-SB09-0809	WY-SB11-0806	WY-SB14-1012	WY-EB-SPOON
CEIMIC NO.:	930507-22	930507-23	930507-24	930507-26	930507-27	930507-09
SAMPLE LOCATION:	SB-5	SB-8	SB-9	SB-11	SB-14	EQUIP. BLANK
SAMPLE DEPTH:	8.0 - 10.0'	8.5 - 14.0'	8.0' - 8.0'	8.0' - 8.0'	10.0 - 12.0'	NA
DATE:	06/05/93	06/05/93	06/05/93	06/06/93	06/07/93	06/04/93
UNITS:	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/l[3]
TCL SVOCs						
NITROBENZENE	480	--	--	--	--	--
2-METHYLNAPHTHALENE	1700	--	--	--	--	--
PHENANTHRENE	--	--	--	--	--	--
DI-N-BUTYLPHTHALATE	--	--	--	--	--	--
PYRENE	--	--	--	--	--	--
CHRYSENE	--	--	--	--	--	--
BIS (2-ETHYLHEXYL) PHTHALATE	820	--	--	--	--	--

NOTES: [1] µg/kg INDICATES MICROGRAMS PER KILOGRAM
[2] -- INDICATES NOT DETECTED AT THE METHOD DETECTION LIMIT
[3] µg/L INDICATES MICROGRAMS PER LITER

TABLE 5 (CONTINUED)
SOIL ANALYSES SUMMARY
FORMALDEHYDE

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

REMCOR SAMPLE NO.:	WY-MW01-0001	WY-MW01-1618	WY-MW02-0001	WY-MW02-1214	WY-MW03-0001
CEMIC NO.:	930507-01	930507-02	930507-03	930507-04	930507-05
SAMPLE LOCATION:	MW-1	MW-1	MW-2	MW-2	MW-3
SAMPLE DEPTH:	0.0 - 1.0'	16.0' - 18.0'	0.0 - 1.0'	12.0' - 14.0'	0.0 - 1.0'
DATE:	08/02/93	08/03/93	08/03/93	08/03/93	08/03/93
UNITS:	(µg/g)[1]	(µg/g)	(µg/g)	(µg/g)	(µg/g)
FORMALDEHYDE	--[2]	2.6	--	--	--

REMCOR SAMPLE NO.:	WY-MW03-0406	WY-MW05-0810	WY-MW04-0001	WY-MW04-0001D	WY-MW04-1416
CEMIC NO.:	930507-06	930507-07	930507-10	930507-11	930507-13
SAMPLE LOCATION:	MW-3	MW-5	MW-4	MW-4	MW-4
SAMPLE DEPTH:	4.0' - 6.0'	8.0' - 10.0'	0.0 - 1.0'	0.0 - 1.0'	14.0' - 16.0'
DATE:	08/04/93	08/04/93	08/04/93	08/04/93	08/05/93
UNITS:	(µg/g)	(µg/g)	(µg/g)	(µg/g)	(µg/g)
FORMALDEHYDE	--	6.7	5.4	8.1	26

REMCOR SAMPLE NO.:	WY-SB01-0102	WY-SB02-1012	WY-SB03-1416	WY-SB04-0001
CEMIC NO.:	930507-14	930507-15	930507-16	930507-17
SAMPLE LOCATION:	SB-1	SB-2	SB-3	SB-4
SAMPLE DEPTH:	1.0' - 2.0'	10.0 - 12.0'	14.0' - 16.0'	0.0' - 1.0'
DATE:	08/03/93	08/03/93	08/04/93	08/04/93
UNITS:	(µg/g)	(µg/g)	(µg/g)	(µg/g)
FORMALDEHYDE	17	18	54	8.4

TABLE 5 (CONTINUED)

FORMALDEHYDE

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

REMCOR SAMPLE NO.: CEMIC NO.: SAMPLE LOCATION: SAMPLE DEPTH: DATE: UNITS:	WY-SB04-1214 930507-19 SB-4 12.0' - 14.0' 08/04/93 (µg/g)	WY-SB07-1012 930507-20 SB-7 10.0' - 12.0' 08/04/93 (µg/g)	WY-SB05-0810 930507-22 SB-5 8.0 - 10.0' 08/06/93 (µg/g)	WY-SB08-0810 930507-23 SB-8 8.0 - 10.0' 08/06/93 (µg/g)
FORMALDEHYDE	14	20	13	6.4

REMCOR SAMPLE NO.: CEMIC NO.: SAMPLE LOCATION: SAMPLE DEPTH: DATE: UNITS:	WY-SB09-0608 930507-24 SB-9 6.0' - 8.0' 08/06/93 (µg/g)	WY-SB11-0608 930507-26 SB-11 6.0' - 8.0' 08/06/93 (µg/g)	WY-SB14-1012 930507-27 SB-14 10.0 - 12.0' 08/07/93 (µg/g)	WY-EB-SPOON 930507-09 EQUIP. BLANK NA 08/04/93 (mg/L)[1]
FORMALDEHYDE	19	70	34	--

REMCOR SAMPLE NO.: CEMIC NO.: SAMPLE LOCATION: SAMPLE DEPTH: DATE: UNITS:	WY-TB-0804 930507-08 TRIP BLANK NA 08/04/93 (mg/L)	WY-TB-0805 930507-12 TRIP BLANK NA 08/05/93 (mg/L)	WY-TB-0806 930507-21 TRIP BLANK NA 08/06/93 (mg/L)	WY-TB-0807 930507-28 TRIP BLANK NA 08/07/93 (mg/L)
FORMALDEHYDE	--	--	--	--

NOTES: [1] µg/g INDICATES MICROGRAMS PER GRAM
[2] -- INDICATES NOT DETECTED AT THE METHOD DETECTION LIMIT
[3] mg/L INDICATES MILLIGRAMS PER LITER

TABLE 6
GROUND WATER ANALYSES SUMMARY

WEYERHAEUSER COMPANY
CHESAPEAKE HARDWOOD PRODUCT FACILITY
HANCOCK, VERMONT
PROJECT NO. 93009

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

VOLATILE ORGANIC COMPOUNDS

REMCOR SAMPLE NO.: CEIMIC NO.: SAMPLE LOCATION: DATE: UNITS:	WY-MW01-0823 930556-04 MW-1 08/23/93 (µg/L)[1]	WY-MW02-0823 930556-05 MW-2 08/23/93 (µg/L)	WY-MW03-0823 930556-06 MW-3 08/23/93 (µg/L)	WY-MW04-0823 930556-07 MW-4 08/23/93 (µg/L)	WY-MW04-0823D 930556-08 MW-4 08/23/93 (µg/L)	WY-MW05-0823 930556-09 MW-5 08/23/93 (µg/L)
TCL VOCs						
TRICHLOROETHENE	--[2]	--	--	--	--	--
TOLUENE	--	--	--	--	--	--
XYLENES	--	--	--	--	--	--

REMCOR SAMPLE NO.: CEIMIC NO.: SAMPLE LOCATION: DATE: UNITS:	WY-MW06-0823 930556-10 MW-6 08/23/93 (µg/L)	WY-CHP-0823 930556-01 MAIN WELL 08/23/93 (µg/L)	WY-DSC-0823 930556-02 DEERING SERV CTR 08/23/93 (µg/L)	WY-EB-0823 930556-03 EQUIP. BLANK 08/23/93 (µg/L)	WY-TB-0823 930556-11 TRIP BLANK 08/23/93 (µg/L)
TCL VOCs					
TRICHLOROETHENE	--	--	--	--	5
TOLUENE	--	--	5	--	--
XYLENES	--	--	23	--	--

NOTES: [1] µg/L INDICATES MICROGRAMS PER LITER
[2] -- INDICATES NOT DETECTED AT THE METHOD DETECTION LIMIT

FILE/19107

TABLE 6 (CONTINUED)
GROUND WATER ANALYSES SUMMARY
TOTAL AND DISSOLVED METALS

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

REMCOR SAMPLE NO.: CEIMIC NO.: SAMPLE LOCATION: DATE: UNITS:	WY-MW01-0823 930556-04 MW-1 06/23/93 (mg/L)[1]	WY-MW02-0823 930556-05 MW-2 06/23/93 (mg/L)	WY-MW03-0823 930556-06 MW-3 06/23/93 (mg/L)	WY-MW04-0823 930556-07 MW-4 06/23/93 (mg/L)	WY-MW04-0823D 930556-08 MW-4 06/23/93 (mg/L)
TOTAL METALS					
COPPER	0.07	0.26	0.29	0.15	0.16
LEAD	0.024	0.036	0.110	0.030	0.031
ZINC	0.07	0.06	0.20	0.06	0.06
DISSOLVED METALS					
COPPER	--[3]	--	0.07	--	--
LEAD	--	--	0.006	--	--
ZINC	--	--	0.01	--	--

TABLE 6 (CONTINUED)
GROUND WATER ANALYSES SUMMARY
TOTAL AND DISSOLVED METALS

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

REMCOR SAMPLE NO.: CEIMIC NO.: SAMPLE LOCATION: DATE: UNITS:	WY-MW05-0823 930556-09 MW-5 08/23/93 (mg/L)	WY-MW06-0823 930556-10 MW-6 08/23/93 (mg/L)	WY-CHP-0823 930556-01 MAIN WELL 08/23/93 (mg/L)	WY-DSC-0823 930556-02 DEERING SERV CTR 08/23/93 (mg/L)	WY-EB-0823 930556-03 EQUIP. BLANK 08/23/93 (mg/L)
TOTAL METALS					
COPPER	0.35	0.11	--	--	--
LEAD	0.118	0.163	--	--	--
ZINC	0.15	0.08	0.05	--	--
DISSOLVED METALS					
COPPER	0.02	--	--	--	--
LEAD	--	--	--	--	--
ZINC	--	0.01	0.04	--	--

NOTES: (1) mg/L INDICATES MILLIGRAMS PER LITER
(2) -- INDICATES NOT DETECTED AT THE METHOD DETECTION LIMIT

FILE/19107

TABLE 6 (CONTINUED)
GROUND WATER ANALYSES SUMMARY
FORMALDEHYDE

REMCOR, INC.
PROJECT NO. 93009
OCTOBER 22, 1993

REMCOR SAMPLE NO.: CEIMIC NO.: SAMPLE LOCATION: DATE: UNITS:	WY-MW01-0823 930556-04 MW-1 08/23/93 (mg/L)[1]	WY-MW02-0823 930556-05 MW-2 08/23/93 (mg/L)	WY-MW03-0823 930556-06 MW-3 08/23/93 (mg/L)	WY-MW04-0823 930556-07 MW-4 08/23/93 (mg/L)	WY-MW04-0823D 930556-08 MW-4 08/23/93 (mg/L)
FORMALDEHYDE	--[2]	--	--	--	--

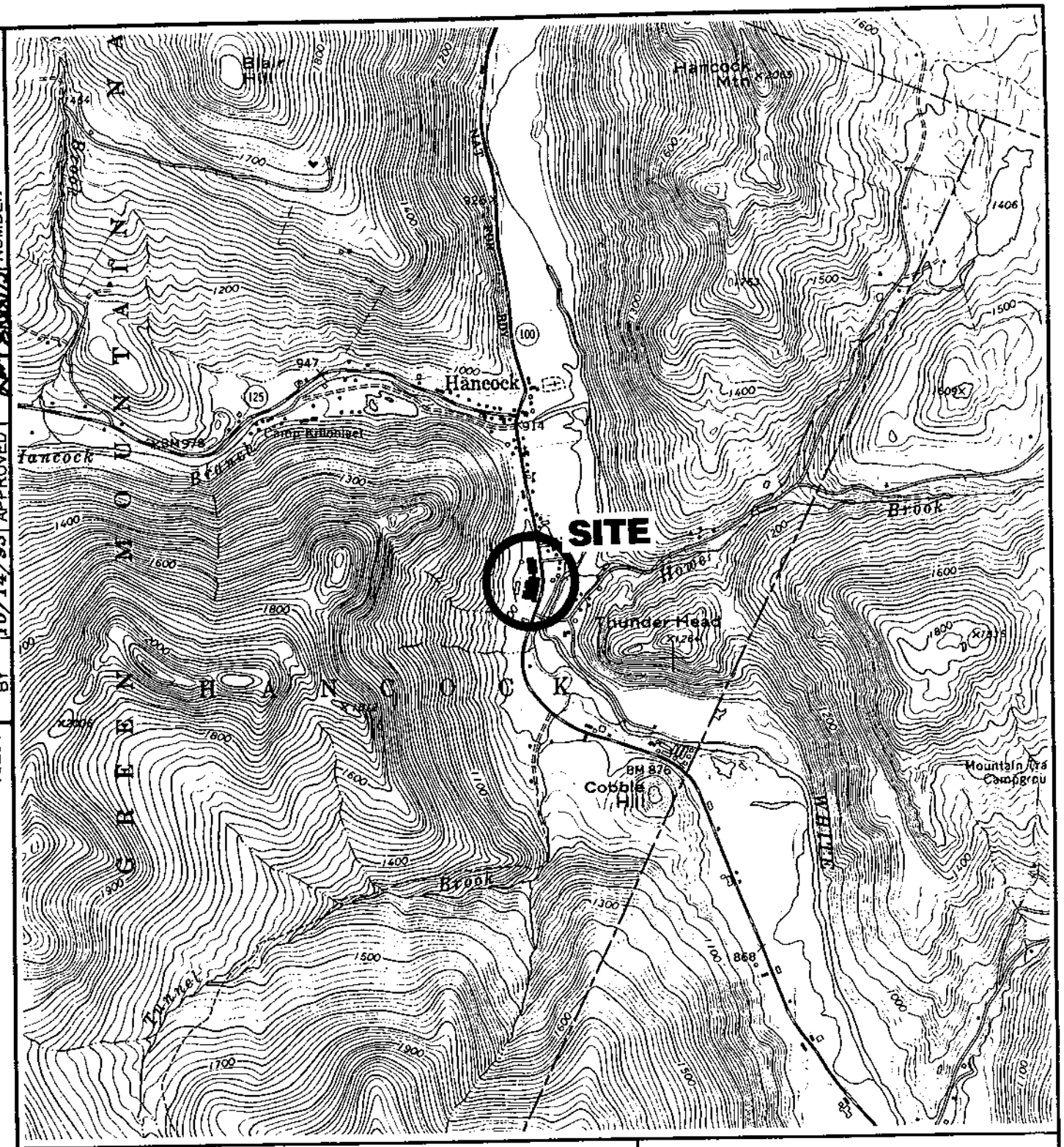
REMCOR SAMPLE NO.: CEIMIC NO.: SAMPLE LOCATION: DATE: UNITS:	WY-MW05-0823 930556-09 MW-5 08/23/93 (mg/L)	WY-MW06-0823 930556-10 MW-6 08/23/93 (mg/L)	WY-CHP-0823 930556-01 MAIN WELL 08/23/93 (mg/L)	WY-DSC-0823 930556-02 DEERING SRV CTR 08/23/93 (mg/L)	WY-EB-0823 930556-03 EQUIP. BLANK 08/23/93 (mg/L)
FORMALDEHYDE	1.7	0.51	--	--	--

NOTES: [1] mg/L INDICATES MILLIGRAMS PER LITER
[2] -- INDICATES NOT DETECTED AT THE METHOD DETECTION LIMIT

RLE/19106

DRAWN BY	CHECKED	DRAWING NUMBER
J.S.S. 10/14/93	APPROVED	93009-A2

19291



SCALE, FEET

0 2000 4000

QUADRANGLE LOCATION

N

REFERENCE:

USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE, HANCOCK, VT, DATED 1970, PHOTOINSPECTED 1983. SCALE 1:24000.

FIGURE 1

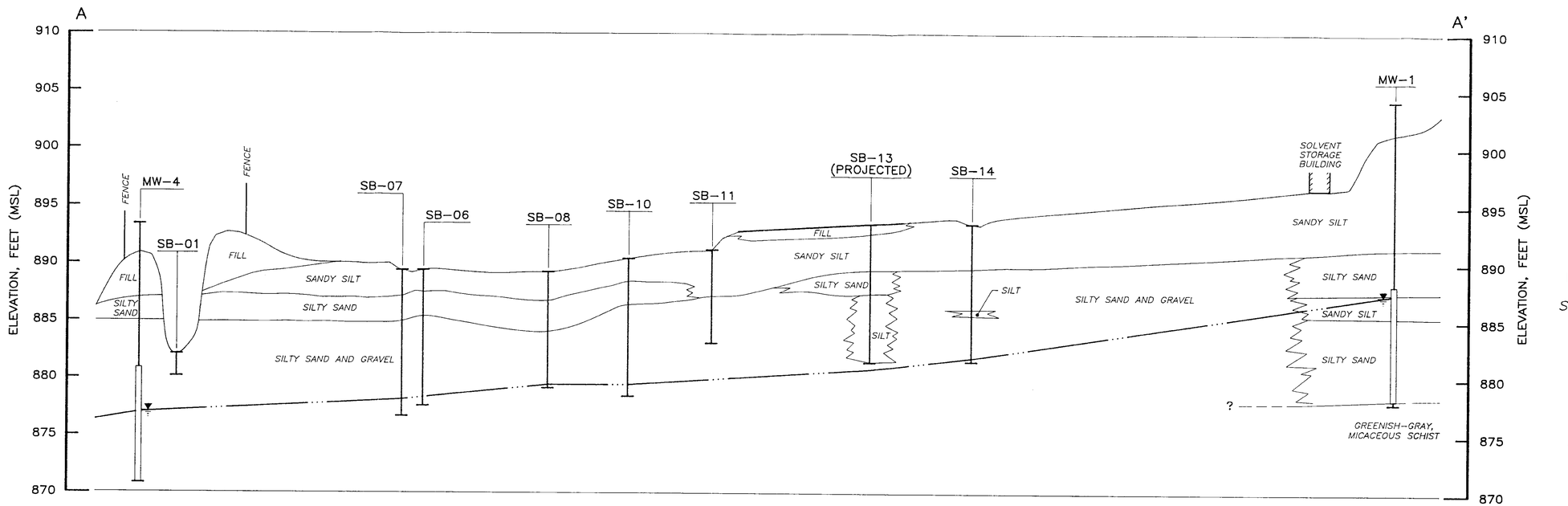
SITE LOCATION MAP

CHESAPEAKE HARDWOOD PRODUCTS, INC. FACILITY
HANCOCK, VERMONT

PREPARED FOR

WEYERHAEUSER COMPANY
TACOMA, WASHINGTON

REMCOR



SECTION A-A'

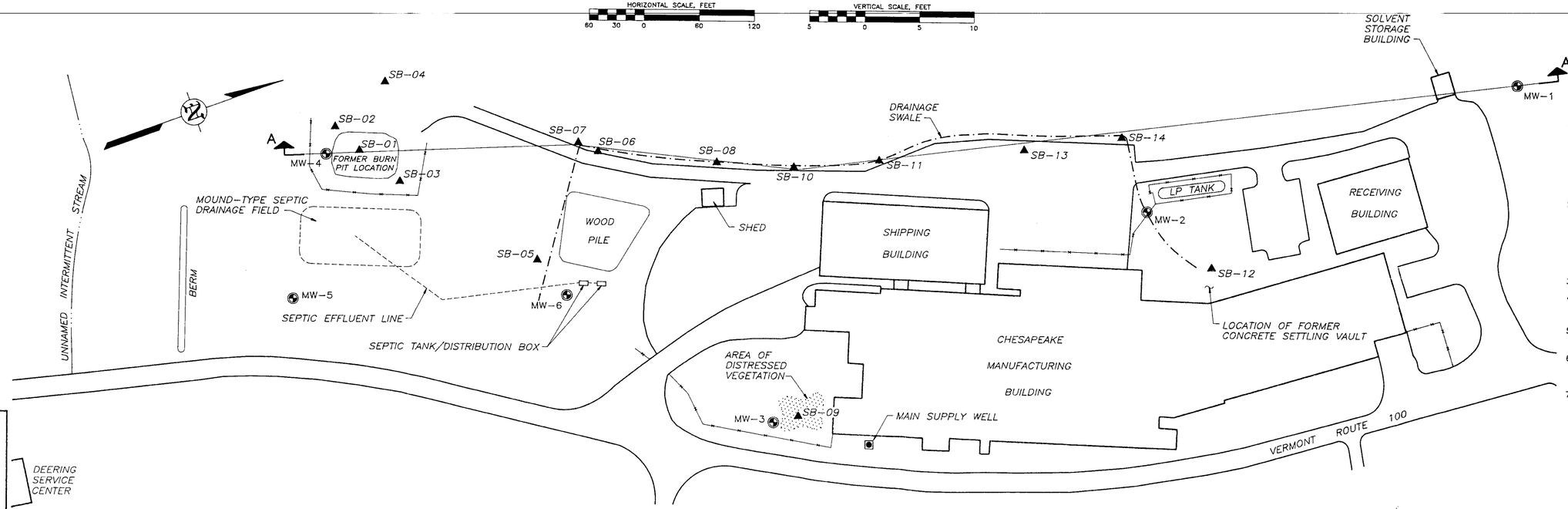
12X VERTICAL EXAGGERATION

HORIZONTAL SCALE, FEET
60 30 0 60 120

VERTICAL SCALE, FEET
5 0 5 10

LEGEND

- MW-1 — GROUND WATER MONITORING WELL LOCATION AND NUMBER
  - TOP OF PVC CASING
  - MONITORING WELL SCREEN LOCATION
  - BOTTOM OF PVC CASING
- SB-08 — SOIL BORING LOCATION AND NUMBER
  - SOIL BORING LOCATION
- MW-1 — MONITORING WELL LOCATION AND NUMBER
- SB-09 — SOIL BORING LOCATION AND NUMBER
- FENCE LINE
- SUPPLY WELL LOCATION
- OBSERVED GROUND WATER SURFACE ELEVATION IN THE SHALLOW WATER-BEARING ZONE, MEASURED ON 08/23/93
- INTERPOLATED GROUND WATER SURFACE ELEVATION IN THE SHALLOW WATER-BEARING ZONE, BASED ON 08/23/93 DATA



PLAN

SCALE, FEET
60 30 0 60 120

NOTES:

1. THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIED LOCATIONS AND DATES INDICATED. SOIL CONDITIONS AND GROUND WATER SURFACE ELEVATIONS AT OTHER LOCATIONS MAY DIFFER FROM CONDITIONS OCCURRING AT THESE BORING LOCATIONS. THE PASSAGE OF TIME MAY RESULT IN SUBSURFACE CONDITION CHANGES.
2. THE DEPTH AND THICKNESS OF THE SUBSURFACE STRATA INDICATED ON THE SECTION WERE GENERALIZED FROM AND INTERPOLATED BETWEEN ACTUAL SOIL BORING LOCATIONS. INFORMATION ON ACTUAL SUBSURFACE CONDITIONS EXISTS ONLY AT THE LOCATION OF THE SOIL BORINGS AND INTERPOLATED SUBSURFACE CONDITIONS BETWEEN THE SOIL BORINGS MAY VARY FROM THOSE INDICATED.
3. ELEVATIONS ARE IN FEET ABOVE MEAN SEA LEVEL.
4. TOPOGRAPHIC PROFILE IS APPROXIMATE AND DEVELOPED BASED ON GROUND SURFACE ELEVATIONS MEASURED AT EXISTING MONITORING WELLS AND SOIL BORINGS.
5. BORING LOGS FOR MONITORING WELLS AND SOIL BORINGS ARE PRESENTED IN APPENDIX A OF THE REPORT.
6. REPRESENTATION OF THE OBSERVED GROUND WATER SURFACE ELEVATIONS ARE BASED ON FIGURE 4, DRAWING NUMBER 93009-E3).
7. ALL LOCATIONS ARE APPROXIMATE.

REFERENCES:

1. WEYERHAEUSER COMPANY, HANCOCK, VERMONT, SAMPLE LOCATION MAP, TRACED FROM ORTHOPHOTO. SCALE 1"=417'.
2. DOHERTY CONSULTING ENGINEERS DRAWING TITLED, "GENERAL PLAN," DATED 8-25-87, PROJ. NO. 8677, SHEET NO. 1. SCALE 1"=50'.
3. SITE SURVEY CONDUCTED BY GARY RAPANOTTI LAND SURVEYOR, JOB NO. 412, AUGUST 19 AND 20, 1993.

REV.	DESCRIPTION:	REVISED	CHECKED	APPROVED
0				

FIGURE 3

SECTION LOCATION AND SECTION A-A'

CHESAPEAKE HARDWOOD PRODUCTS, INC. FACILITY
HANCOCK, VERMONT

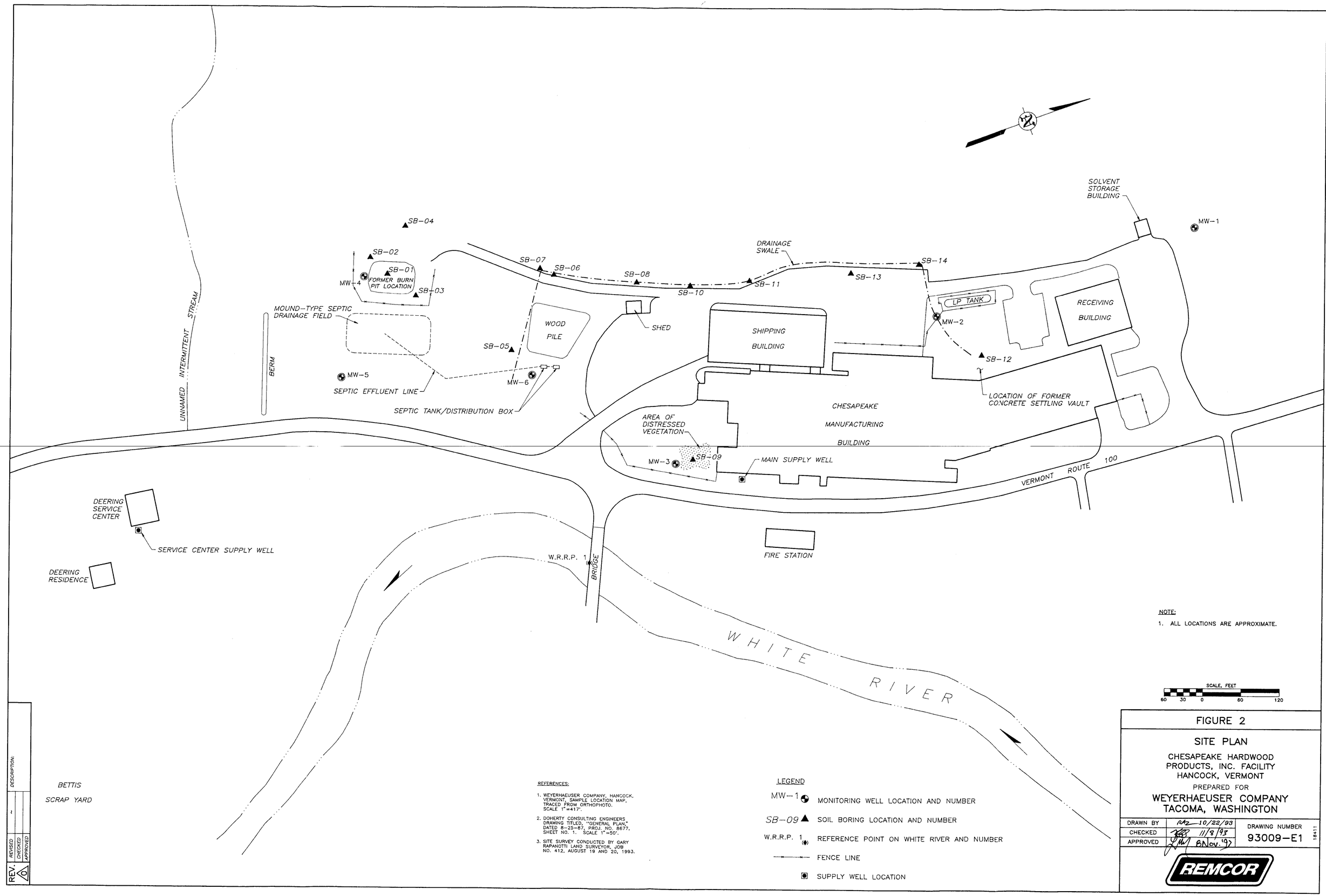
PREPARED FOR

WEYERHAEUSER COMPANY
TACOMA, WASHINGTON

DRAWN BY	J.S.S. 10/22/93	DRAWING NUMBER
CHECKED	11/8/93	93009-E3
APPROVED	8 Nov. 93	

19132

REMCOR



NOTE:

1. ALL LOCATIONS ARE APPROXIMATE.

SCALE, FEET

60 30 0 60 120

REFERENCES:

1. WEYERHAEUSER COMPANY, HANCOCK, VERMONT, SAMPLE LOCATION MAP, TRACED FROM ORTHOPHOTO. SCALE 1"=417'.
2. DOHERTY CONSULTING ENGINEERS DRAWING TITLED, "GENERAL PLAN," DATED 8-25-87, PROJ. NO. 8677, SHEET NO. 1. SCALE 1"=50'.
3. SITE SURVEY CONDUCTED BY GARY RAPANOTTI LAND SURVEYOR, JOB NO. 412, AUGUST 19 AND 20, 1993.

LEGEND

- MW-1 — MONITORING WELL LOCATION AND NUMBER
- SB-09 — SOIL BORING LOCATION AND NUMBER
- W.R.R.P. 1 — REFERENCE POINT ON WHITE RIVER AND NUMBER
- FENCE LINE
- SUPPLY WELL LOCATION

REV.	DESCRIPTION:	REVISED	CHECKED	APPROVED
1	~			

FIGURE 2

SITE PLAN

CHESAPEAKE HARDWOOD PRODUCTS, INC. FACILITY
HANCOCK, VERMONT

PREPARED FOR

WEYERHAEUSER COMPANY
TACOMA, WASHINGTON

DRAWN BY	RAZ 10/22/93	DRAWING NUMBER
CHECKED	11/3/93	93009-E1
APPROVED	8 Nov. '93	

18411

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