

Pacific Yew” (USDA, March, 1992) were employed. Where bark was sourced from private lands, all required state permits applicable to bark collection were also obtained. This reserve inventory will be used to supply requirements for bulk drug substance until paclitaxel derived from alternative cultivated biomass sources is made available (see Section 8).

Harvest of Pacific yew for paclitaxel production on public and private land was conducted under permit during the period 1992-1996. The last date of harvest on federal land occurred at the end of the harvest season (late fall), 1993. The last date of harvest on private land was in November of 1996. All harvesting activities on state lands were completed prior to September 1996. Harvest of yew took place on public and private lands in the states of Oregon, Washington, Idaho, and Montana, and on private lands in the state of California. See **Appendix A** for a list of yew harvest permittees to Hauser Northwest and Adverse Inc.

The following section relating to the source of the Pacific Yew tree bark is delineated according to oversight by the two main permitting authorities:

- A. *State & Private Lands*
- B. *Federal Lands*

Permitting Authorities

From 1992-1994, the primary company harvesting Pacific yew for Hauser Chemical was Hauser Northwest, based in Cottage Grove, Oregon. This company dissolved at the end of 1994, and in 1995-96 was replaced by a company called Adverse, Inc., also based in Cottage Grove. During the five years that yew was harvested, these two companies obtained dozens of permits from federal, state, and private landowners. Permits were obtained prior to all harvest that was conducted. Permits stipulated the conditions of the harvest and provided a legal contract vehicle between the landowner and either Hauser Northwest or Adverse, Inc. The flowchart in Figure 1, Appendix B provides an overview of the entire process of paclitaxel production from yew tree harvesting to manufacturing.

The harvesting from all private, state and federal land was conducted in accordance with all applicable federal, state and local laws, regulations and guidances. Of the states mentioned, harvesting from state lands only occurred in Washington and Montana.

Given the large number of permittees (**Appendix A**), information is provided by permitting authority, therefore, the following discussion will be presented in two sections and will include the permitting process, harvest methods, harvesting guidelines, and mitigation/conservation measures for each group:

A. All state and privately owned lands that were harvested under the authority of state agencies will be treated as a group (see Table 1 below).

B. All federally owned lands, harvested under the authority of the USDA Forest Service or USDI Bureau of Land Management will be treated as a separate group.

A. State And Private Owned Lands:

Table 1
Permitting Authorities and Oversight

State	Regulatory Oversight	Regulatory Permitting Authority	Act
Oregon	Oregon Department of Forestry	State Forest Practices Acts and Rules of Oregon	(ORS 527.610 and OAR Chapter 629)
Washington	Washington Department of Natural Resources	State Forest Practices Acts and Rules of Washington	(RCW 76.09 and WAC 222)
Idaho	Idaho State Department of Lands	State Forest Practices Acts and Rules of Idaho	(Title 38 Chapter 13 of Idaho Code and IDAPA 20.02.01)
California	California Department of Forestry and Fire Protection	State Forest Practices Acts and Rules of California	California (Title 14 CCR, Chapters 4 and 4.5 and PRC 4511-4628)
Montana	Montana State Department of Lands	Montana Environmental Policy Act	Act (MEPA – MCA 75-1-101-75-1-324 and ARM 26.2.628 – 26.2.663)
Montana	Montana State Department of Lands	Streamside Management Zone Act	(SMZ Law – MCA 77-5-301 – 77-5-3076, ARM 26.6.610).

A detailed discussion of above table is provided below.

Harvest of Pacific yew on private and state lands is **regulated** under the state Forest Practices Acts and Rules of Oregon (ORS 527.610 and OAR Chapter 629), Washington (RCW 76.09 and WAC 222), Idaho (Title 38 Chapter 13 of Idaho Code and IDAPA 20.02.01), and California (Title 14 CCR, Chapters 4 and 4.5 and PRC 4511-4628). Yew harvest in Montana is regulated under the Montana Environmental Policy Act (MEPA – MCA 75-1-101-75-1-324 and ARM 26.2.628 – 26.2.663) and the Streamside Management Zone Act (SMZ Law – MCA 77-5-301 – 77-5-3076, ARM 26.6.610). The regulatory agencies responsible for **oversight** are: the Oregon Department of Forestry, California Department of Forestry and Fire Protection, Washington Department of Natural Resources, Montana State Department of Lands, and Idaho State Department of Lands.

In Washington State, yew harvest occurred on both privately owned lands and state trust lands. Harvest on privately owned land was exempt from requiring a Forest Practices Act permit due to the non-commercial nature of the harvest. Private landowners, such as Champion International Corp., required Hauser Northwest to obtain a special forest products permit from Washington State Department of Natural Resources (DNR). DNR had authority to inspect the harvest, but probably did so infrequently. Hauser Northwest conducted inspections on each harvest and filed reports internally. For harvest on state trust lands, DNR completed a State Environmental Policy Act (SEPA) checklist and issued a determination of non-significance. DNR issued permits to Hauser Northwest to harvest yew according to a specific set of operating requirements outlined in the contract (**Appendix C**). Hauser Northwest carried the primary responsibility for inspection of these harvests.

Similar processes were used in the states of Oregon, California, Idaho, and Montana. The harvest on private lands was authorized by landowners and subject to conditions of permits between landowners and Hauser Northwest (see example permit in **Appendix D**). In Oregon, the State Department of Forestry required landowners to file a Notification of Intent to Harvest Timber. Upon submitting this notice, a landowner implied consent to the State Forester to inspect the harvest operation for Forest Practices Act compliance. Landowners in California were required to notify the Department of Forestry and Fire Protection of the intent to harvest yew, and were issued exemption notices by the Department. These notices exempted the landowner from filing a timber harvesting plan but specified that compliance with all provisions of the Forest Practices Act would be required and inspections would be performed. Harvest on state lands in Montana was subject to environmental analysis under the Montana Environmental Policy Act. An analysis was conducted by the Montana Department of Natural Resources for each of two areas where yew harvest was later permitted. Harvest on private lands in Montana was not regulated by DNR, but was required to comply with the state's Streamside Management Zone Act. Harvest on private lands in Idaho was regulated similarly to that in Washington state. Permits issued by private landowners required compliance with the state Forest Practices Act, under the authority of Idaho State Department of Lands.

Method of Harvest

Harvest of yew bark was conducted in a similar manner under most of the permits that were issued. Typically, yew harvest took place prior to a commercial timber harvest. Hauser Northwest initially received permission from landowners to conduct inventories for Pacific yew on their land. Based on these inventories, Hauser proposed areas suitable for harvest to the landowner. Permits were issued and subcontractors were hired to conduct the harvest. A collector packet was issued to each subcontractor detailing the method of harvest to use (see Collector Packet in **Appendix E**). The standard method of harvest involved cutting of yew trees that were greater than three inches in diameter at stump height (approximately 12 inch above the ground). Trees having a diameter of less than three inches were left for regeneration. Cutting was done with chain saws. The typical operation involved a single cutter followed by four or five peelers who came through and peeled bark from the cut portion of the tree using hand peeling tools. Peeled bark was loaded by hand into 50 lb. bags, tied with twine, and carried to an established loading site for transportation to the dryer. All bags were ticketed with identification numbers that could be used to trace the bark to the permit under which it was harvested. This enabled verification of legal harvest.

B. Federal Lands

Table 2
Permitting Authorities and Oversight

States Permitting Authority	Guiding Document	Act
National Forest and Bureau of Land Management (BLM) in Oregon, Washington, Idaho, and Montana	An Interim Guide to the Conservation and Management of the Pacific Yew (USDA Forest Service)	The Pacific Yew Act, 16 U.S.C. § § 4801 – 4807

A detailed discussion of above table is provided below.

Permits to harvest Pacific yew were issued on National Forest and Bureau of Land Management (BLM) lands in Oregon, Washington, Idaho, and Montana. These agencies developed yew programs that were carried out at the local level and were closely monitored. An Interim Guide to the Conservation and Management of the Pacific Yew (USDA Forest Service 1992) was the guiding document used to establish Forest Service harvest programs. The BLM issued Pacific Yew Administrative Policies in 1992 as a guide to administering the yew harvest for that agency. These agencies were responsible for ensuring that harvest would be conducted according to agency guidelines as mandated by The Pacific Yew Act, 16 U.S.C. § § 4801 – 4807. This often involved extensive on-the-ground inventory and assessment before any harvest was planned.

Once internal planning had taken place, District offices issued Administrative Use Permits for Yew Harvest to Hauser Northwest (see example in **Appendix F**). These permits specified the exact location harvest was to take place, the quantity of yew bark to be harvested, and specific instructions for conducting the harvest. These instructions included a detailed description of the ticketing process used for accounting of all yew that was transported, and provisions for the protection of other resources such as streams, cultural resources, fire, and wildlife.

Provisions of the contracts were passed on to the individual collectors under contract with Hauser Northwest. A collector packet was issued to all collectors, with detailed specifications for conducting the harvest. Inspection of harvest was made by both Hauser Northwest and the government inspectors. Work that did not meet specifications was required to be redone or, in some cases, the contract was terminated. Examples of Forest Service inspection reports are in **Appendix F**.

Method of Harvest

Harvest of Pacific yew on federal land was conducted in association with the commercial timber sale program. Generally, areas that were to be harvested for Pacific yew were either previously harvested for timber (such as through clearcutting or selective cutting), or were planned to be harvested for timber immediately following the yew harvest. In 1992, approximately half of the harvest sites were in clearcuts or otherwise harvested units. By 1993, nearly 90 percent of the harvest was conducted in units prior to commercial harvest of timber.

The standard method of harvest involved cutting of yew trees that were greater than three inches in diameter at stump height (approximately 12 inch above the ground). Trees having a diameter of less than three inches were left for regeneration. Other restrictions were sometimes imposed on the harvest. For example, some contracts specified cutting only half of the harvestable trees. Many entailed leaving yew in green tree retention clumps within the harvest unit. Cutting was done with chain saws. The typical operation involved a single cutter followed by four or five peelers who came through and peeled bark from the cut portion of the tree using hand peeling tools. Peeled bark was loaded by hand into 50 lb. bags, tied with twine, and carried to an established loading site for transportation to the dryer. All bags were ticketed with identification numbers that could be traced to a permit for verification of legal harvest.

In most cases, felled and stripped yew trees were left on site; however, in at least one case where bark was not stripped immediately, trees were yarded and loaded onto trucks for transport to debarking facilities. There, the difficult to detach bark was stripped from the tree by machine. This method proved more costly than hand-peeling and was not done frequently. Another method that was also not used frequently (possibly only done in one case), was to leave yew trees standing and harvest the bark by stripping only a portion of it from living trees, leaving the rest of the bark intact. This occurred in one incident on federal land in southern Oregon.

Endangered Species And Yew:

The Pacific yew is not listed under the Federal Endangered Species Act (ESA), or under the Convention on International Trade in Endangered Species (CITES) as endangered or threatened. The Pacific yew does comprise a component of habitat for several federally listed threatened or endangered animal species. This list appears in Appendix J of the Pacific Yew DEIS (USDA Forest Service et al. 1993). The list has also been reproduced in Appendix G of this document. As previously described in this section, Pacific Yew trees were harvested from lands in Oregon, Washington, Idaho, Montana and California. Within each of these states it was necessary for the harvesters to abide by all federal, state and local regulations and guidances that were intended to provide protection to endangered or threatened species under circumstances that would have included harvesting Pacific Yew.

Idaho had no specific state or local laws pertaining to protection of endangered or threatened species. Montana had an endangered species act that was superseded by the federal law. Within these states, the Federal Endangered Species Act formed the basis of the restrictions on harvesting to protect endangered or threatened species. California (California Endangered Species Act), Oregon (ORS 564 and ORS 496.171-192) and Washington (Washington Endangered, Threatened, Sensitive Wildlife Species Classification) have specific state laws pertaining to identification and protection of endangered or threatened species. These state laws, in combination with the Federal Endangered Species Act, formed the basis of the restrictions on harvesting to protect the endangered or threatened species.

Within these states, permits were obtained for specific harvesting plans. State inspectors verified that the harvesting was being conducted in areas absent of endangered species. Some permits or harvest contracts granted by the states also listed applicable restrictions to the land use where endangered species lived.

For example, the Harvest Contract granted by the State of Washington Department of Natural Resources was included in Appendix C of the April 2, 1999 Major Amendment beginning on page 700022. On page 700027, under Section 7 Operating Requirements, numbers 7 and 8 both place restrictions on how close harvesting is allowed to any forest stand known to be occupied by marbled murrelets (no closer than 0.25 miles) and any known spotted owl site centers (no closer than 0.7 miles).

Hauser has certified that the harvesting done in support of this application complied with all state, local and federal regulations and guidances that were intended to provide protection to endangered or threatened species under circumstances that would have included harvesting Pacific Yew.

6.2.b Mitigation Measures

Standard Mitigation

Standard mitigation measures on all land ownerships were included in the Hauser Northwest Collector Packet (**Appendix E**). These included leaving 12 inch stumps with bark intact (to increase the chances of regeneration through sprouting), leaving all suckers below the cut to increase the stump's chances of survival, and peeling only trees three inches in diameter and greater, leaving smaller trees to revegetate the area. Hauser Northwest personnel were responsible for inspecting for compliance with these guidelines. Inspection reports were completed and filed with Hauser Northwest. Inspection reports available in the files demonstrate a high rate of compliance.

See section 7 for more information.

6.2.c Alternatives to the Proposed Action

No further Pacific Yew will be collected for this product and any future supplies of paclitaxel will either come from non-endangered wild species or cultivated yew. At this time we have not selected a future alternate source. *See section 8 for more information.*

7. MITIGATION MEASURES

Federal Lands

Mitigation measures for yew harvest on federal lands were addressed in Appendix C of the Pacific Yew Draft Environmental Impact Statement (USDA Forest Service et al. 1993). Many of these measures were pre-emptive; rather than “repairing, rehabilitating, or restoring the resource” they conserved the resource through actions such as green-tree retention and leaving of stumps and saplings.

Measures required by the Forest Service Interim Guidelines are listed below.

- Establish genetic reserves.
- Include vigorous, undamaged, yew trees in the green-tree reserve whenever possible.
- No harvesting of yew trees less than three inches in stump diameter
- All yew stumps should have intact bark and should be shaded with slash or adjacent vegetation. All stumps should be at least 12 inches high. Avoid damaging stumps.
- Where possible, position green trees to provide shade for yew stumps and advance yew regeneration.
- Favor logging systems and slash disposal methods that protect residual yew trees.
- No harvest within 75 feet of the average high water level of perennial streams
- Incorporate spotted owl management guidelines within 1/4 mile of active spotted owl nests.
- If harvesting outside of a timber sale unit, leave 50% of yew trees, or 5 trees per acre minimum.
- Apply special local restrictions if harvest is within ungulate winter range.
- Regenerate with sprouts, layers, cuttings, or seedlings to achieve at least the yew density estimated to have been present in the preharvest stand.

State And Private Lands

No future harvest will occur. Most permits required some form of resource protection through mitigation or conservation measures. Harvest on state trust lands required more mitigation measures than harvest on privately owned lands. For example, the state of Washington issued operating requirements that included: no harvest of yew where the density of yew is less than five trees/acre, no harvest of yew within 0.25 miles of any forest known to be occupied by marbled murrelets, no yew harvest within 0.7 miles of any known spotted owl site center, and no yew harvest within 75 feet of perennial streams (**Appendix C**). Hauser Northwest was responsible for compliance with these operating requirements and final oversight authority rested with DNR.

Other Measures:

Other measures were sometimes required by local Forest Service offices. For example, on the Butte Falls Ranger District, Rogue River National Forest, a special prescription for yew retention based on wildlife value was written (**Appendix H**). This required patches of 10-15 trees to be retained approximately every acre within harvest units.

The federal agencies were ultimately responsible for ensuring mitigation measures were implemented. Some measures were performed by the government and others by Hauser Northwest. The Mt. Hood National Forest in Oregon had a large Pacific yew harvest program and can be used to illustrate the implementation of the Interim Guide with respect to mitigation measures.

One of the first actions taken prior to permitting yew harvest on the Mt. Hood National Forest was the establishment of genetic reserves where yew would be protected. This occurred as outlined in the Interim Guidelines. Timber sale units with abundant yew that occurred outside of genetic reserves were then planned for permitting yew harvest. The amount and quality of yew, as well as the likelihood of regeneration, were assessed prior to permitting. Within the units, green-tree reserves were established by the Forest Service to protect a portion of the yew trees from harvest. During harvest, Hauser Northwest and its contractors were responsible for implementing other mitigation measures such as leaving bark on stumps, providing shade for resprouting, and prohibiting harvest within riparian reserves. These measures were monitored by the Forest Service for compliance and documented on inspection report forms. The final measure to regenerate yew with sprouts, cutting, layers, or seedlings was the responsibility of the Forest Service. This was done as nursery stock supplies allowed. Most sites were regenerated naturally, due to lack of nursery stock for planting.

Conclusion:

In the course of such bark collection activities, all of the mitigation measures specified in the FEIS and in "An Interim Guide to the Conservation and Management of Pacific Yew" (USDA, March, 1992) were employed. Standard mitigation measures on all land ownerships were included in the Hauser Northwest Collector Packet (**Appendix E**). These included leaving 12 inch stumps with bark intact (to increase the chances of regeneration through sprouting), leaving all suckers below the cut to increase the stump's chances of survival, and peeling only trees three inches in diameter and greater, leaving smaller trees to revegetate the area. Hauser Northwest personnel were responsible for inspecting for compliance with these guidelines. Inspection reports were completed and filed with Hauser Northwest. Inspection reports available in the files demonstrate a high rate of compliance. Therefore, all mitigation measures required of Hauser, by federal, state and local governmental authorities, were accomplished.

8 ALTERNATIVES TO THE PROPOSED ACTION

The proposed action in this application includes the use of a supply of Pacific Yew bark that has previously been collected for the manufacturing process. No further Pacific Yew will be collected for this product. Any future supplies of paclitaxel will either come from non-endangered wild species or from cultivated yew. At this time we have not selected a future alternate source. Once that selection is made we will notify the FDA in accordance with 21 CFR 314.96 or 314.70 and additional EA information will be provided to FDA if required.

Alternative 1: It is possible to synthetically produce paclitaxel. This option would prevent the harvesting of any flora and would be expected to be of lesser environmental impact than harvesting options. However, Bristol Myers' patent protection prohibits easy access to a suitable synthetic scheme. This option is therefore not viable from a business standpoint.

Alternative 2: It is possible to extract paclitaxel from non-endangered wild species such as *Taxus yunnanensis*, *Taxus baccata* and *Taxus cuspidata*. We have not selected any non-endangered wild species as an alternate source at this time. Several environmental and business factors will be considered before proposing this route as a commercial alternative. Environmental factors include confirmation that harvesting will be done within local, state and federal forestry and endangered species laws and that any other effects from the harvesting of these trees on the local ground and water habitats will be limited. Those business factors to be considered are price, quality and reliability of future supplies.

Alternative 3: It is possible to extract paclitaxel from cultivated yew species such as *Taxus Hicksii*, *Taxus media* and *Taxus X media Hicksii*. We have evaluated *Taxus X media Hicksii* and found it acceptable for use on a chemical basis. Exhibit batches have been manufactured and may be submitted to this application in the future to support this alternate source. Several environmental and business factors will be considered before proposing this route as a commercial alternative. Environmentally, this alternative is attractive, as the cultivated species are harvested from privately controlled plantations, thus assuring that no local, state and federal endangered species laws will be violated. The environmental impact on the local ground and water habitats is also easier to monitor and control. From an environmental standpoint, the use of cultivated yew species is preferable to harvesting of non-endangered wild yew species. Business factors including price, purity and reliability of future supplies have still to be evaluated.

Alternative 4: Non-approval of this application for environmental reasons or pending development of an alternative biomass source is not warranted because:

- The paclitaxel gathered from Pacific Yew, the subject of this application, has already been harvested (i.e. trees already harvested and paclitaxel extracted). No further Pacific Yew will be harvested.
- The already harvested material is of no value if it is not used, however, if it is processed and used to manufacture drug, its value will be realized as medication to the patient population.
- Non-approval would deny the patient population a less expensive alternative for this much-needed drug.

Therefore, non-approval of this application would not provide any benefit to the environment beyond that of approval of the application.

9. LIST OF PREPARERS

The following participated in preparation of this document:

Name: Steven Viti, Ph.D.
Job Title: Acting Director, Regulatory Affairs, Baker Norton Pharmaceuticals, Inc.
Qualifications: 14 years Analytical/Regulatory experience in the pharmaceutical industry.

Name: Jacqueline Howard, B.A.
Job Title: Regulatory Associate, Regulatory Affairs, Baker Norton Pharmaceuticals, Inc.
Qualifications: 4 years Regulatory experience in the pharmaceutical industry.

Boetang and Associates, Inc. were consulted in the preparation of this Environmental Assessment. Information was also provided by Hauser Chemical Company.

10. REFERENCES

1. Pharmaceutical Manufacturers Association, *Interim Guidance to the Pharmaceutical Industry for Environmental Assessment Compliance Requirements for the FDA*. July, 1991.
2. U.S. Food and Drug Administration, *Environmental Technical Assistance Handbook*, PB87-175345, U.S. Department of Commerce National Technical Information Service, Springfield, VA. 1987
3. Center for Drug Evaluation and Research, *Guidance for Industry Environmental Assessment of Human Drug and Biologics Applications* (July 1998).
4. *Notice for Paclitaxel Drug Products; Environmental Information Needed in New Drug Applications, Abbreviated New Drug Applications, and Investigational New Drug Applications* (Federal Register, November 18, 1996).
5. Pacific Yew, Draft Environmental Impact Statement (EIS), USDA Forest Service in Cooperation with USDI Bureau of Land Management and USDHHS Food and Drug Administration, 1992.
6. Non-Confidential Environmental Assessment, Taxol® for Injection Concentration (New Drug Application 20-262), Bristol-Myers Squibb Company, 1992.
7. Notice, Paclitaxel Drug Products; Environmental Information Needed in New Drug Applications, Abbreviated New Drug Applications, and Investigational New Drug Applications, Department of Health and Human Services, Food and Drug Administration, Federal Register, November 18, 1996.

8. USDA Forest Service. 1992. An Interim Guide to the Conservation and Management of Pacific Yew. 72 pp.
9. USDA Forest Service, USDI Bureau of Land Management, and DHHS Food and Drug Administration. 1993. Pacific Yew Draft Environmental Impact Statement.

11. APPENDICES

NON-CONFIDENTIAL APPENDICES A - H

- Appendix A Partial List of Yew Harvest Permitters to Hauser Northwest and Adverse, Inc.
- Appendix B Flow Chart of Yew Bark from Raw Material to Manufacturing.
- Appendix C Washington State Dep. of Natural Resources Pacific Yew Harvest Contract.
- Appendix D Example Yew Harvest Permit – Private Landowner.
- Appendix E Hauser Northwest Collector Packet.
- Appendix F USDA Forest Service Example Yew Harvest Permit and Inspection Report.
- Appendix G Threatened & Endangered Species Possibly Affected by Pacific Yew Harvest.
- Appendix H Pacific Yew Harvest Wildlife Mitigation on Rogue River National Forest.

CONFIDENTIAL APPENDICES 1 - 3

- Appendix 1 Expected Introduction Concentration Calculation.
- Appendix 2 Confidential Statement on Harvesting, Reserve Bark and Processing.
- Appendix 3 Confidential Statement on Amount of Trees Required to Produce Treatment for Patients.

APPENDIX A

**PARTIAL LIST OF YEW HARVEST PERMITTERS TO HAUSER
NORTHWEST AND ADVERSE, INC.**

700018

**PARTIAL LIST OF YEW HARVEST PERMITTERS TO HAUSER NORTHWEST AND
ADVERSE, INC.**

Privately-owned Lands

Boise Cascade Corporation
Champion International Corporation
Georgia-Pacific Corporation
John Hancock Mutual Life Insurance Company
Longview Fibre Company
Michigan California Lumber Company
Pacific Gas and Electric
Plum Creek Timber Company
Potlatch Corporation
Roseburg Lumber
Seneca Timber Company
Sierra Pacific
Weyerhaeuser Corporation
Willamette Industries

State Lands

Montana State Department of Lands
Washington State Department of Natural Resources

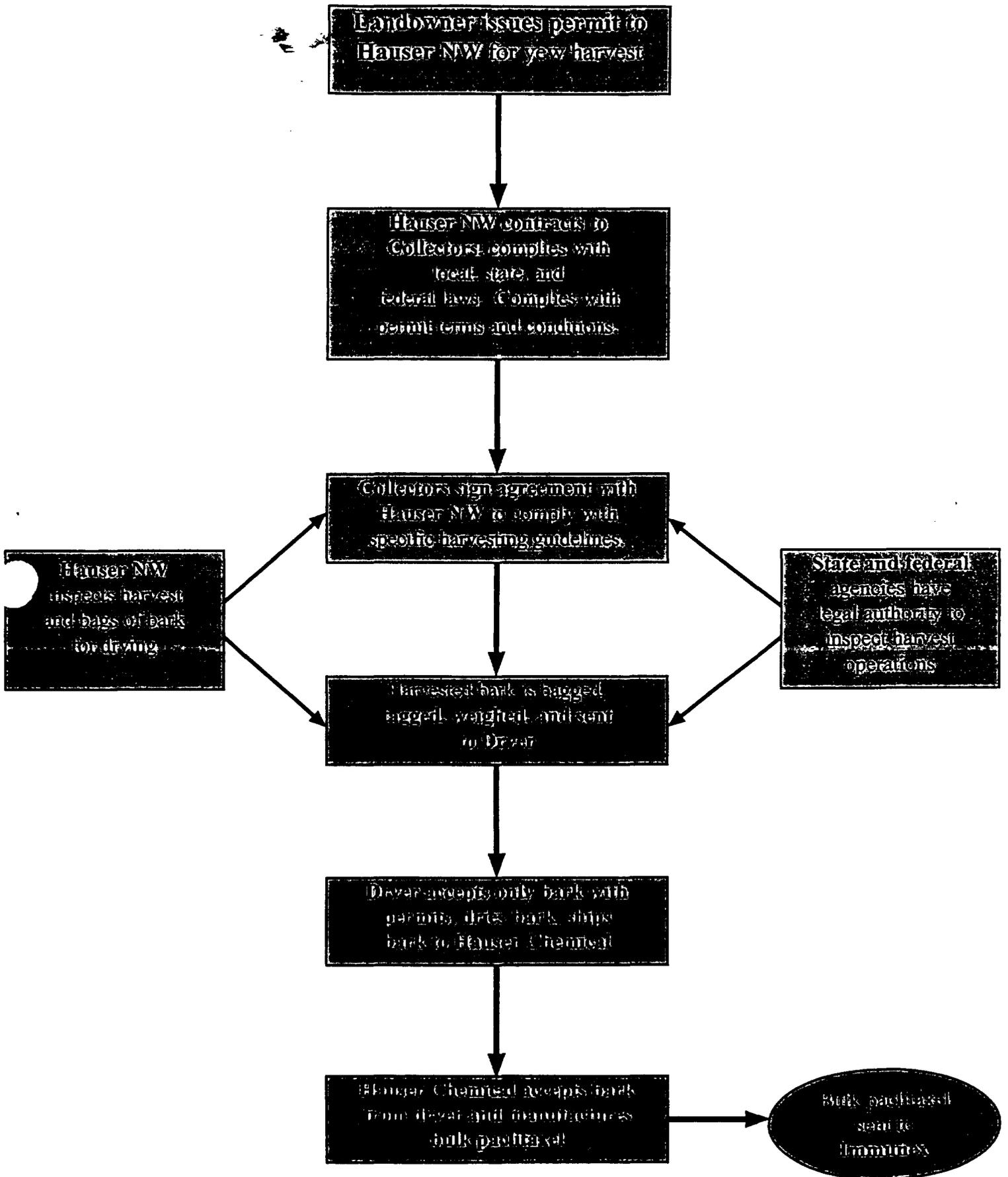
Federal Lands

Bureau of Land Management - Oregon
Bureau of Land Management - Washington
Flathead National Forest
Gifford Pinchot National Forest
Mount Baker-Snoqualmie National Forest
Mount Hood National Forest
Mount St. Helens National Volcanic Monument
Olympic National Forest
Rogue River National Forest
Siskiyou National Forest
Umpqua National Forest
Willamette National Forest

APPENDIX B

Figure 1.
Flow Chart of Yew Bark from Raw Material to Manufacturing

Flow of Yew Bark from Raw Material to Manufacturing



700021

APPENDIX C

**STATE OF WASHINGTON DEPARTMENT OF NATURAL RESOURCES
PACIFIC YEW HARVEST CONTRACT**

700022

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
JENNIFER M. BELCHER, Commissioner of Public Lands
Olympia, Washington 98504

Lease No. 35-069419

By this Lease, the STATE OF WASHINGTON, Department of Natural Resources, hereinafter called the "State," leases to HAUSER NORTHWEST, INC., hereinafter called the "Lessee," the premises in Jefferson County, Washington, the legal description, and reservations, if any, of which are set forth in Exhibit IA, upon the terms and conditions and for the consideration enumerated herein. All exhibits to this lease are attached and incorporated herein.

The State recognizes that the lease area as presently identified on Exhibit IA is subject to change due to new information or restrictions on harvest. Therefore, adjustments to lease area may be set forth in revised Exhibit IA, during the term of this lease.

SECTION 1 OCCUPANCY

1.01 Lease Term. This lease shall commence on June 28, 1993 or date of signature by the "State," whichever is later, and expire on October 1, 1994, or upon the completion of Lessee's operations, whichever date occurs first, provided however, that the state may terminate this lease at any time, in the event of Lessee's breach of any of the terms or conditions hereof, or when the State is suffering or there is reasonable expectation that the State will suffer damage if the lease is allowed to continue.

Upon verbal or written notice of any violation of the terms and conditions of this lease, the Lessee, including but not limited to, agents, employees, licensees or permittees, shall suspend operations pending correction of the violation or cancelation of the lease.

SECTION 2 USE OF PREMISES

2.01 Permitted Use. The leased area, hereinafter called the "premises," are to be used for the harvesting of Pacific Yew (*Taxus brevifolia*) bark and for no other purposes whatsoever. Harvesting, within the meaning of this lease, shall be described as cutting Yew trees and removing the bark subject to sub-section 7.04.

SECTION 3 PAYMENT

3.01 Payment. The lessee shall pay to the State, at: DNR Olympic Region, Route 1 Box 1375, Forks, Washington 98331, a rate of \$0.30 per pound of wet weight of Pacific Yew bark removed from leased premises. Lessee shall submit these payments on a weekly basis.

Lessee shall submit copies of trip tickets and a stumpage report on a weekly basis to: DNR Olympic Region, Route 1 Box 1375, Forks, Washington 98331. Lessee will comply with the load accountability system specified in subsection 7.02.

3.02 Surety. As a guarantee of the full and faithful performance of the provisions of this lease and payment of all sums due the State herein, including payment for all damages suffered by the State by reasons of the operations under this lease, the Lessee will deliver before commencing operations under authority hereof, a cash deposit, a Surety Bond, or a Savings Account Assignment in a form acceptable to the State in the sum of \$2,000.00

3.03 Adjustment to payment. The payment specified in subsection 3.01 is subject to reappraisal by the State on January 1, 1994.

700023

SECTION 4 RESERVATIONS

4.01 Compliance. The State shall have access to the premises at all reasonable times for any management purposes.

4.02 Public Hunting. All State lands leased for grazing, agricultural purposes or minor forest products shall be open and available to the public for purposes of hunting and fishing unless closed to public entry because of:

(1) Fire hazard;

(2) It being necessary to close the area to avoid undue interference with the carrying forward of a departmental or agency program;

(3) The Lessee having been given specific written approval by the Department of Natural Resources to lawfully post the area to prohibit hunting and fishing thereon in order to protect: (a) crops, (b) other land cover, (c) improvements on the land, (d) livestock, (e) the Lessee, (f) the general public.

4.03 Management. The State reserves the right to enter upon the leased premises to manage and sell the forest or mineral resources.

4.04 State Does Not Warrant. The State does not warrant any of the following:

- a. The condition of the forest products. The forest products are conveyed "as is."
- b. The volume, quality, or grade of the forest products. The description of the forest products conveyed in this lease are estimates only, made for the sole purpose of identification.
- c. Items which extend beyond the description of the face of this contract.
- d. The presence or absence of any threatened or endangered species listed by the US Fish and Wildlife Service that may affect the operability of this lease.

The State disclaims any responsibility for, or liability relating to, regulatory actions by any government agency, including actions pursuant to the Forest Practices Act, Ch. 76.09 RCW, that may affect the operability of this lease.

4.05 Restrictions on Use. In connection with use of the premises the Lessee shall:

(1) Conform to applicable laws and regulations of any public authority affecting the premises and the use thereof and correct at the Lessee's own expense any failure of compliance created through the Lessee's fault or by reason of the Lessee's use;

(2) Remove no valuable material, except those identified in Sub-section 2.01, without prior written consent of the State;

(3) The Lessee agrees to provide sufficient personnel and equipment at its expense to satisfy the requirements as provided by law that may be imposed upon the State and/or the Lessee. Lessee further agrees to make available all of the personnel and equipment used on the operating area for direct hire to the State at established fire fighting rates of the State for suppression of any fires occurring within the general vicinity. An operating area shall be defined as any area within the described premises on which any cutting or other harvesting activity has taken place under this lease.

(4) All operations on the premises shall cease during logging shutdowns in the local area. Shutdowns of all or a portion of the area near or surrounding the premises for any reason beyond the control of the State or shutdowns by the State or other agencies of the State of Washington because of fire danger shall not be a basis of claim against the State.

(5) ~~Not~~ Allow debris or refuse to accumulate on the leased premises, caused either by Lessee, or any person authorized on the premises by the Lessee. Failure to comply with this provision may permit the State to remove the debris and refuse and collect the cost of such removal from the Lessee and/or cancel this lease;

(6) Notify the State and local authorities immediately if refuse or debris accumulates on the leased premises as the result of actions of trespassers or persons permitted on the premises by the provision of Sub-section 4.02. Failure to comply with this Sub-section shall cause the debris accumulation to be the responsibility of the Lessee as set forth in Paragraph (5).

4.06 Higher and Better Use. This lease is subject to cancellation upon sixty days' written notice in the event the area covered thereby is included in a plan of development to higher and better use. (Provided, however, the Lessee will be allowed to use the premises for the current harvest season.)

4.07 Lease Recording. The State reserves the right to have this lease recorded with the County Auditor.

SECTION 5 REQUIREMENTS

5.01 Assignment and Sublease. Any rights created by this lease may not be assigned, sublet or transferred without written permission from the State. Permission to assign, sublet or transfer rights under this lease may be conditioned by charging additional rent based upon the present market value of such rights. The State may condition or deny the granting of a request for an assignment based upon its opinion of the financial reliability and capability of the proposed assignee or transferee. Further, if the Lessee shall be a corporation or partnership and if at any time during the term of this lease any part or all of the corporate shares or partnership interests of the Lessee shall be transferred by sale, assignment, bequest, inheritance, operation of law, or other disposition so as to result in a change in the present control of the lease by the person or persons now owning a majority of the corporate shares or change in the holding of the partnership interests, the transfer shall be deemed as requiring an assignment.

5.02 Duty. The Lessee, at its sole cost and expense, shall at all times keep or cause all improvements (regardless of ownership) to be kept in as good condition and repair as originally constructed or as hereafter put, except for reasonable current wear and tear. In all cases, the premises and improvements shall be maintained at a standard acceptable to the industry. The State may require the Lessee to carry insurance of types and in amounts sufficient to protect improvements on the leased premises. Any such requirement imposed will be given to the Lessee in writing.

5.03 Condition of Premises. The premises have been inspected by the Lessee and are accepted in their present condition. Further the Lessee will be responsible for the payment of any fines or penalties charged against the premises as a result of its action in not complying with laws or regulations affecting the premises.

5.04 Insolvency of Lessee. If the Lessee becomes insolvent, bankrupt, receiver appointed, or their interest is transferred by operation of law, the State may cancel this lease at its option. Insolvency as used herein will mean the inability of the Lessee to meet obligations as they come due.

5.05 Insurance. The Lessee shall at Lessee's expense procure and maintain insurance during the term of the lease. Upon request, an insurance certificate shall be sent to the State. If the Lessee fails to procure and maintain said insurance the State may procure said insurance and be reimbursed for such costs by the Lessee. Such policies must require a minimum of thirty (30) days written notice to the State prior to any change in the amount of coverage, expiration, or cancellation of said policies. The amount of insurance required may hereafter be increased or decreased, at the option of the State and at the time that rental adjustments are made after reappraisal pursuant to subsections 3.04.

Liability Insurance. The Lessee shall obtain liability insurance for bodily injury and property damage insurance, sufficient to insure State and Lessee against any liability arising out of the ownership, use, occupancy, or maintenance of the property and all areas appurtenant thereto. The limits of the required insurance shall not limit potential liability of the Lessee pursuant to the terms of this lease.

5.06 Road Easement and Road Use Permit Requirements. Purchaser agrees to comply with the attached terms and conditions of the easement entered into between the State and Rayonier Incorporated, dated June 15, 1964; and Dixmont Land Company, R.D. Merrill Company, Ring Company, and Rayonier Incorporated, dated September 2, 1964. (Exhibit 1.C)

SECTION 6 MISCELLANEOUS

6.01 No Partnership. The State is not a partner nor a joint venturer with the Lessee in connection with the business carried on under this lease and shall have no obligation with respect to the Lessee's debts or other liabilities.

6.02 Non-Waiver. Waiver by either party of strict performance or any provisions of this lease shall not be a waiver of nor prejudice the party's right to require strict performance of the same provision in the future or of any other provision.

6.03 Attorney Fees. Each party shall be responsible for their own attorney fees in the event of a dispute arising out of this agreement except as set forth in Sub-section 3.02 and 6.05. Venue for resolving such disputes shall be in Thurston County Superior Court.

6.04 Succession. Subject to the limitations as stated in Sub-section 5.01 on transfer of the Lessee's interest, this lease shall be binding upon and inure to the benefit of the parties, their respective successors and assigns.

6.05 Notices.

(1) Any notice required or permitted under this lease shall be given when actually delivered or when deposited in the United States mail addressed as follows:

To the State: Department of Natural Resources
Olympic Region Office
Route 1, Box 1375
Forks, WA 98331.

To the Lessee: Hauser Northwest, Inc.
78120 Highway 99 South
Cottage Grove, Or 97424

6.06 Liens. In the event liens or other charges are placed on the leasehold premises, including land or improvements, arising out of the Lessee's actions directly or indirectly, the Lessee shall immediately cause such liens or charges to be discharged. The State may forthwith cancel this lease if Lessee fails to discharge such liens or charges after ten (10) days' notice to do so by the State. The Lessee shall pay and indemnify the State for all costs, damages or charges of whatsoever nature, including attorneys' fees, necessary to discharge such liens or charges, whether such costs, damages or charges are incurred prior or subsequent to any cancellation of this lease. However, any cancellation of the lease would be delayed in case a legally valid dispute was commenced within ten (10) days of the filing of the lien.

6.07 Default. If the Lessee shall violate or default any of the covenants and agreements contained herein, including the obligation to pay; then the State may cancel this lease provided that the Lessee has been notified of the violation or default fifteen (15) days prior to such cancellation and such violation or default has not been corrected with such time.

6.08 State's Right to Cure Defaults.

(1) If the Lessee fails to perform any requirement or obligations under this lease, the State shall have the option to correct the obligation of the lease after fifteen (15) days' written notice to the Lessee. All of the State's expenditures to correct the default shall be reimbursed by the Lessee on demand with interest at the rate of 1 percent per month accrued from the date of expenditure by the State.

700026

(2) In the event any violation or breach of the provisions of this lease is causing damage to the leasehold premises or the Lessee is utilizing the leasehold premises in a manner not permitted by the provisions of this lease, or in any case damages are occurring to the leasehold premises, the State may immediately enter upon the leasehold premises and take such action as necessary to cease such damages or use. In the event the damage or use is occurring by reason of a violation or breach of the provisions of this lease, the Lessee shall be liable for all costs incurred by the State by reasons of such violations. The State, at its option, may send notice to the Lessee of such violations and the Lessee shall immediately cease such use or violation and correct and remedy such violations, or in the event violations continue, the State reserves the right to cancel this lease.

SECTION 7 OPERATING REQUIREMENTS

7.01 Pre-Work Conference. Lessee will designate one primary field representative who will be the sole contact for field activities. Lessee shall arrange with the Olympic Region office to review this lease and leased premises prior to any field activity on this lease.

7.02 Load Accountability System. Lessee will have a load accountability system which at least has:

1. Bag tags with consecutive numbers and certified bag weights.
2. Trip tickets which detail:
 - a) Area peeled.
 - b) Date peeled.
 - c) Peeler name.
 - d) Bag numbers in load

Lessee will submit, on a weekly basis to region office, a complete accounting of all bag tags, trip tickets, and pounds of yew bark removed.

7.03 Trip Tickets. Lessee shall complete and use trip tickets as directed by the State and, if required, use other identification as directed by the State to ensure accounting of forest products removed from the lease area. A trip ticket must be fixed, as designated by the State, to each truck or trailer load prior to leaving the area.

Lessee shall account for all trip tickets issued. The State may treat trip tickets not accounted for as lost forest products. All costs associated with computing the billings for lost loads shall be borne by the Lessee.

Lessee agrees to pay the State, as liquidated damages, a sum of \$250.00 each time a load of yew bark does not have the required ticket attached as required by this lease.

7.04 Operation. The following harvest guidelines must be strictly adhered to:

1. Yew will be cut leaving at least a 12-inch stump with the bark intact. All suckers below the cut will be left to ensure the stump's chances of survival.
2. Yew < 3 inches dbh or > 16 inches dbh will not be harvested.
3. Yew will not be harvested within 75 feet of perennial streams.
4. Yew bark will be peeled (by hand) at the site. All bark will be packed out to the nearest road; no mechanical means will be used to haul the bark back to the road.
5. Peel all limbs to 1 inch plus in diameter; peel to at least a 1 inch top.
6. Debarked yew (logs) will be left on the forest floor at the cutting site.
7. Yew will not be harvested within 0.25 miles of any forest stand known to be occupied by marbled murrelets between April 1 and September 25.
8. No Yew harvest will be allowed within 0.7 miles of any known spotted owl site center.
9. Yew will not be harvested in areas where the density of yew > 3 inches dbh and < 16 inches dbh is less than 5 trees/acre.

10. At least 50% of the yew in each size class present (3-9 inches dbh, 10-16 inches dbh) or at least 5 yew/acre > 3 inches dbh and < 16 inches dbh will be left, whichever is greater. The "leave" trees will be distributed throughout the stand to reflect the natural distribution in each of the 2 size classes.

11. At least 80% of all trees of any species in each size class (3-9 inches dbh, 10-16 inches dbh) will be left. In other words, yew harvest will not remove more than 20% of the trees in each mid-size class.

12. Lessee shall submit, to the appropriate region office, an ortho photograph indicating potential harvest areas. These areas will be checked, by region staff, to verify harvest availability.

These operating requirements are subject to change, pending compliance with any regulatory action by any government agency.

SECTION 8 OPERATION OF PREMISES

8.01 Management. This land shall be managed in a husbandly manner according to standards acceptable to the industry.

8.02 Title. Title to crops authorized in Sub-section 2.01 on the premises shall vest with the Lessee at the time of severance.

8.03 Road Authorization. Unless otherwise provided herein the Lessee is authorized, subject to previous rights conveyed by the State, to use all existing roads on State land needed for operations under this lease, and to construct and maintain roads on the lease premises needed for operations under this lease with written approval by the State.

8.04 Road Easements. Lessee shall provide valid easements to the State of Washington for roads required for access to State land to a county or state road. State shall allow to the Lessee right of way access in approved locations across State land subject to payment of damages.

8.05 Road Maintenance. At all times during the term of this contract, Lessee shall keep all roads used for operations under this lease open and in such state of repair as to permit normal operation of a motor vehicle.

8.06 Road Reservations. The State shall have the right to use, without charge, all existing roads and/or any road constructed or reconstructed on State lands by the Lessee under this lease for any and all purposes deemed necessary or desirable in connection with the control, management, harvest and administration of State-owned land or the resources thereof and further, the State may extend such rights and privileges to others;

PROVIDED, That use by others shall be controlled by the State so it will not, in the opinion of the Department, interfere unduly with the use of the road by the Lessee;

PROVIDED, However, contractors using these roads for the removal of timber or other resources must, as the State directs, pay their proportionate share of maintenance of these roads based on their use of them. This required payment shall not relieve any contractor or Lessee from liability for repair of damage to said roads, including bridges and culverts, due to overloading trucks, carelessness or negligence on the part of the contractor or Lessee, its employees, subcontractors and their employees.

8.07 Fire Hazardous Conditions. Lessee agrees to conduct operations including maintenance and operation of equipment in a manner to minimize the risk of fire.

8.08 Fire Control Equipment. The Lessee shall have in its possession at the location of its vehicle, when working on the lease area between April 15 and October 15 of each year, the following fire protection equipment:

- 1 Axe weighing at least 3 lbs. with handle at least 32" long
- 1 shovel - LHRP or SHRP
- 1 Adze eye hoe
- (A pulaski tool may be substituted for the adze eye hoe and axe)

8.09 Closure. All operations on the premises shall cease during logging shutdowns in the local area. Shutdowns of all or a portion of the area near or surrounding the premises for any reason beyond the control of the State or shutdowns by the State or other agencies of the State of Washington because of fire danger shall not be a basis of claim against the State.

8.10 Open Fires. ~~Lessee~~ shall not set or allow to be set by Lessee's employees or subcontractors any open fire at any time of the year without first obtaining permission in writing from the State.

8.11 Fire Suppression. Upon discovery of any fire on or in the vicinity of the Premises the Lessee shall immediately notify owner and the nearest State Fire Warden and shall use all its equipment and employees to suppress any such fire, regardless of the cause or origin of the fire.

SECTION 9 IMPROVEMENTS

9.01 Unauthorized Improvements. All improvements made on or to the premises without the written consent of the State shall either be removed immediately by the Lessee, removed by the State at the cost of the Lessee, or become the property of the State, at the State's option.

9.02 Existing Improvements. As of the effective date of this lease, all improvements on the premises belong to the State.

9.03 Disposition of Improvements. At the expiration or termination of this lease, except as provided in Sub-section 6.07, all improvements shall belong to the State except those authorized improvements, as defined by RCW 79.01.036, consisting of the following: None

The value of such authorized improvement, if any, at expiration or earlier termination of lease term will be calculated in accordance with the provisions of RCW 79.01.092 and RCW 79.01.136.

In the event the Lessee owns authorized improvements and the Lessee is not issued a new lease at expiration, the State may, at its option, purchase such improvements as provided by RCW 79.01.136. If the State does not exercise its option to purchase the improvements within sixty (60) days after lease expiration, it shall offer the premises for lease at public auction, with improvements, within one (1) year of lease expiration. The value of such improvements shall be collected at the time of public auction and the money so collected shall be remitted to the Lessee less any damages due the State.

In the event the proposed lease with improvements is not leased at public auction, a committee comprised of three (3) individuals will be formed. These individuals must have expertise in the fields of land management, agriculture, Christmas tree production and/or as noted in the permitted use to serve on this committee. Said committee shall be made up of one member appointed by the State, whose expenses shall be borne by the State, one member appointed by the Lessee, whose expenses shall be borne by the Lessee, and one member to be appointed by the two aforementioned members, whose expenses shall be shared equally by the Lessee and the State.

The committee shall confirm the values of the improvements and establish minimum rents to be used for re-offering the lease at public auction. Such offering shall be within three (3) months after the committee has presented its findings to the State.

If the proposed lease prepared as a result of the committee's findings is not leased at public auction, then all of the improvements of the Lessee shall belong to the State.

9.04 Removal of Improvements. During the term of this lease or on expiration, authorized improvements which will be owned by the Lessee at the expiration or termination of this lease as described in Sub-section 9.03 may be removed by the Lessee, but not during a harvest season without the permission of the State. The Lessee will be liable for any and all damage to the premises or the improvements belonging to the State resulting from such removal.

9.05 Improvements. The State (in agreement with the Lessee) may, but is not obligated to, make improvements of any kind on or to the premises, except as noted under Sub-section 6.08.

SECTION 10 GENERAL PROVISIONS

10.01 Indemnity. From and after the lease commencement date, the Lessee shall indemnify and save harmless the State, its employees, officers, and agents from any and all liability, damage, expense, cause of action, suit, claim, or judgment, by any reason whatsoever caused, arising out of the use, occupation, or control of the premises by Lessee, Lessee's sublessees, ~~agents~~ agents, employees, licensees, or permittees excepting only that which is due to the willful or negligent act of the State or the State's employees, officers, or agents.

10.02 Lessee's Authority. Persons executing this lease on behalf of Lessee represent that they are authorized to do so and warrant that this lease is a legal, valid, and binding obligation on behalf of Lessee, and is enforceable in accordance with its terms.

10.03 State's Authority. This lease is entered into by the State pursuant to the authority granted by statute and the Constitution of the State of Washington. The terms and conditions hereof are subject to such statutory and constitutional provisions as may be now in effect and such provisions which do not impair the contractual rights of Lessee under this lease which may lawfully be enacted subsequent to the date of this lease.

10.04 Preservation of Markers. Any legal land subdivision survey corners, reference points or monuments are to be preserved. If such are destroyed or disturbed, the Lessee shall re-establish them by a licensed land surveyor in accordance with U.S. General Land Office standards at Lessee's expense. Corners and/or reference points or monuments that must necessarily be disturbed or destroyed in the process of carrying out the operations allowed by this lease must be adequately referenced and/or replaced in accordance with Chapter 58.09 RCW. Such references and replacements must be approved by the State prior to removal of said corners, reference points or monuments.

10.05 Condemnation. If all of the premises are taken by any lawful authority under the power of eminent domain for a period which will end on or extend beyond the expiration of the term of this lease, this lease terminates as of the date the condemner takes possession. If part of the premises is taken by any lawful authority under the power of eminent domain for a period which will end on or extend beyond the expiration of the term of this lease, the State or Lessee may choose to terminate this lease as of the date the condemner takes possession.

If temporary use of all or part of the site is taken by any lawful authority under the power of eminent domain for a period ending before the expiration of the term, this Lease will continue in full force and Lessee will be entitled to receive any award from the condemner for the use of all or part of the premises.

The State and Lessee will give to the other immediate written notice of any proceedings with respect to a condemnation and of any intentions of any authority to exercise the power of eminent domain.

10.06 Interpretation and Numbering. This lease has been submitted to the scrutiny of all parties hereto and their counsel if desired, and shall be given a fair and reasonable interpretation in accordance with the words hereof, without consideration or weight given to it being drafted by any party hereto or their counsel. Section numbers, headings, or titles are for convenience only and are not to be construed to limit or to extend the meaning of any part of this Lease.

10.07 Time of Essence. Time is expressly declared to be of the essence of this lease and each and every covenant of Lessee hereunder.

10.08 Entire Agreement. This written lease or its successor or replacement contains the entire agreement of the parties hereto with respect to the matters covered hereby, and no other agreement, statement or promise made by any party hereto, or to any employee, officer or agent of any party hereto, which is not contained herein, shall be binding or valid.

10.09 Invalidity. If any term or provision of this Lease or the application thereof to any person or circumstance shall to any extent prove to be invalid, unenforceable, void, or illegal, the remainder of this Lease, or the application of such term or provision to persons or circumstances other than those as to which it is invalid or unenforceable, shall be not

affected thereby, and each term and provision of this Lease shall be valid and be enforced as written to the fullest extent permitted by law.

10.01 Discrimination. Lessee shall not conduct or suffer any business upon the Premises which unlawfully discriminated against any person on the basis of race, color, creed, religion, sex, age, or physical or mental handicap.

10.11 Exhibits. All conditions appurtenant to this lease and said premises are contained within said exhibits as follows:

Exhibits: IA, IB, IC, ID.

The Lessee expressly agrees to all covenants herein and binds himself for the payment of the rental hereinbefore specified.

Executed this 8th day of JULY, 1993.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

John M. Calhoun
John M. Calhoun
Olympic Region Manager

Signed this 8th day of July, 1993

HAUSER NORTHWEST, INC.

By Rodney L. Erickson
Wash. Mnggr. Title

78120 Highway 99 South
Cottage Grove, Oregon 97424
(503) 942-9655
(503) 748-9769

App. No. 35-069419

700031

STATE OF WASHINGTON)
COUNTY OF Clallam) ss

On this 8th day of July, 1993, personally appeared
before me Clarence W. Erickson

to me known to be the manager
of the corporation that executed the within and foregoing instrument, and acknowledged
said instrument to be the free and voluntary act and deed of said corporation, for the uses
and purposes therein mentioned, and on oath stated that (he/she was) (they were)
authorized to execute said instrument and that the seal affixed is the corporate seal of said
corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal
the day and year first above written.

Kathy Kwanis
Notary Public in and for the State of
Washington residing at Clallam Co.
Comm. Exp. 3-10-94

STATE OF WASHINGTON)
County of Clallam) ss

On this 8th day of July, 1993, personally appeared before me
John Calhoun, to me known to be the Olympic Region Manager of the Department of
Natural Resources, State of Washington, who executed the within and foregoing instrument
on behalf of the State of Washington, and acknowledged said instrument to be the free and
voluntary act and deed of the State of Washington for the uses and purposes therein
mentioned, and on oath stated that he was authorized to execute said instrument and that
the seal affixed is the official seal of the Commissioner of Public Lands for the State of
Washington.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day
and year first above written.

Kathy Kwanis
Notary Public in and for the State of
Washington, residing at Clallam
My appointment expires 3-10-94

TERMS AND CONDITIONS

Terms and conditions of the easement with: Dixmont Land Company, R.D. Merrill Company, Ring Company and Rayonier Incorporated dated September 2, 1964 and with Rayonier Incorporated dated June 15, 1964:

1.) The Purchaser shall not unreasonably interfere with the use of said right of way and road by Rayonier and Merrill & Ring, their contractors and purchasers.

2.) The Purchaser shall indemnify and hold harmless Rayonier and Merrill & Ring from all loss, cost, liability, damage or expense of any kind for injury to or death of person or damage to or loss of property, arising out of or connected with the use or occupancy of the above described right of way by said Purchaser and his agents, employees and contractors.

3.) The Purchaser shall obtain and maintain in force during the entire term of the contract a policy of liability insurance, insuring Purchaser, his agents, employees and contractors, against liability arising out of their operations, including use of vehicles. The minimum amounts of insurance shall be \$100,000 for injury to any one person and \$300,000 for any one occurrence as respects bodily injury and \$100,000 for any one occurrence (using the logger's property damage coverage identified in Exhibit A attached hereto and by this reference made a part hereof, or its equivalent) as respects property damage; provided, however, that the parties may, by mutual agreement, establish such other limits as they deem necessary. Rayonier, Merrill & Ring and the State shall not be named as an insured under any said policy. All insurance policies shall be obtained from insurance companies that are duly authorized to do business in the State of Washington, and are registered pursuant to Washington statutes. Further, purchaser shall deliver to Rayonier, Merrill & Ring and the State, a certificate from the insurer, stating that coverage in the named amount is in force, and that, in the event of cancellation or modification of said coverage, the insurer will give Rayonier, Merrill & Ring, and the State ten days' notice of any cancellation or modification.

EXHIBIT 1D

LEASE # 35-069419

E-51

700033

APPENDIX D

EXAMPLE YEW HARVEST PERMIT - PRIVATE LANDOWNER

PERMIT

Effective as of June 9, 1993,

COMPANY,
Oregon 97381, hereinafter referred to as _____, hereby
grants to HAUSER NORTHWEST, INC., 78120 Highway 99 South, Cottage
Grove, Oregon 97424, hereinafter referred to as "Permittee", the
non-exclusive right, license and permission to enter and be upon
lands located on the _____; Tree Farm, as
shown on the attached Exhibit "A", and/or as specifically approved
by _____'s Forester, for the purpose of collecting and
removing Pacific yew products for taxol extraction. This permit is
granted subject to the following terms and conditions:

1. DATE OF EXPIRATION: October 31, 1993
2. CONSIDERATION: \$.30 per green pound of Pacific yew bark removed from the permitted premises. Permittee shall submit copies of trip tickets along with payment on a bi-weekly basis to _____'s office.
3. OTHER PROVISIONS: Permittee shall:
 - A. Notify _____ through the _____ Tree Farm Manager, at the onset and completion of activity in each area.
 - B. Provide required notification to the State Department of Forestry and comply with all applicable provisions of the Forest Practices Act.
 - C. Not block or interfere with other authorized traffic using _____ roads or other activities on the land.
 - D. Take all reasonable precautions to prevent unauthorized persons from entering _____ land.
 - E. Be responsible for any taxes due and payable as a result of Permittee's activities.
 - F. Maintain _____ roads used, leaving the roads and ditches in the same condition as found at the beginning of the operation.
 - G. Fully repair all damage to roads caused by the Permittee in the exercise of the privileges granted by this permit.

rights-of-way, insuring the Permittee against liability arising out of its operations, including use of vehicles. Minimum amounts of insurance shall be:

(1) Bodily Injury \$ 500,000 for injury to one person
\$1,000,000 for any one occurrence

(2) Property Damage \$1,000,000 for any one occurrence

(b) Deliver to hereto a certificate from the insurer of Permittee certifying that coverage is not less than the above named amounts is in force and that, in the event of cancellation or modification of such coverage, the insurer will give ten (10) days' written notice prior to any cancellation or modification.

7. SECURITY FUND: Permittee has deposited with \$5,000.00 (cash or surety bond) as security for the performance of all the obligations on the part of Permittee to be performed hereunder. If Permittee defaults in the performance of any obligation hereunder, may apply said sum to the extent necessary to reimburse itself in a sum equal to any damage sustained on account of such default. Any residue remaining after any such application will be repaid to Permittee by Permittee shall be and remain liable for any deficiency and for all amounts which may be due to by reason of any default hereunder by Permittee, after such application.

8. TERMINATION AND SUSPENSION:

A. All rights hereunder shall terminate on the date of expiration set forth in paragraph 1.

B. All rights hereunder shall terminate automatically ten (10) days after notice of default given by either party to the other, if the default has not been remedied within such time. The termination of this permit shall not prejudice 's right to collect damages accrued theretofore or thereafter accruing on account of Permittee's breach of any term hereof.

C. Any failure to exercise a right to terminate this permit in case of default shall not constitute a waiver of the defaulting party's obligation to perform strictly in accordance with the terms of the permits. Any such right to terminate shall remain in full force and effect and may be exercised so long as such default continues.

Name:

Date:

Landowners Name: _____

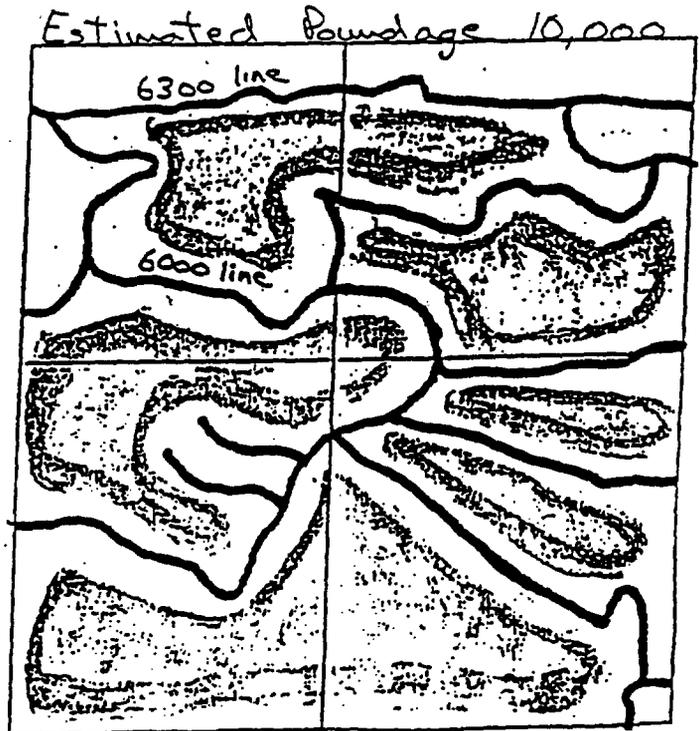
Township	Range	Section	Quartersection	Acres	Bark Available
S	E	1			10,000

Access Code: 1 (easy) 4 (difficult)

Access Comments:

Other Comments (Note: Concentrations, Diameters of Trees, etc...)

 location of Yew wood
 Road System



APPENDIX E

HAUSER NORTHWEST COLLECTOR PACKET

700038

HAUSER

HAUSER CHEMICAL RESEARCH, INC.

Welcome Aboard!

Hauser Northwest, Inc. utilizes a network of independent contractors to collect the bark of the Pacific yew, a tree that grows throughout the forests of the Northwestern United States. Many people are depending on our company to provide an uninterrupted source of yew bark for the extraction of taxol, a chemical derived from that bark.

HAUSER NORTHWEST, INC.
A SUBSIDIARY

Taxol is used for cancer research and treatment. According to National Cancer Institute Director Dr. Samuel Broder "taxol is the most important new (cancer) drug to come along . . . in 10 or 15 years." Our work is important, because ultimately, people's lives will depend on taxol-based medical research and treatment. Your work is important because it represents the first step in that process — providing the raw materials needed to provide taxol.

But that job is not a simple one. Although large populations of Pacific yew are located on public lands managed by the U.S. Forest Service, Bureau of Land Management or state governments, substantial amounts are also located on private lands. In either case, your job as an independent contractor is to meet all legal responsibilities and to collect yew bark in the most efficient, most ecologically responsible manner.

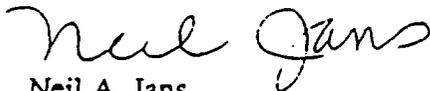
Collectors must avoid wasting this precious resource and must abide by the highest ethical standards in obtaining yew bark. Anything less will jeopardize the bond of trust that you, our independent contractor-collectors, have established with private landowners and public agencies.

As an independent contractor collecting yew bark, you will be working under the authority of yew harvesting permits granted to Hauser Northwest. You will be expected to work toward protecting the environment and ensuring the long-term health of Pacific yew, as well as producing specified amounts of yew bark. To help you meet this responsibility, Hauser Northwest, Inc. has developed collection handbook for you to use as a reference while working on private forestlands, state lands, and those administered by the Forest Service or BLM.

Inside, you will find answers to many of the questions that you may have about the goals and objectives of the bark collection program, and to many of the questions that you may have about your role as an independent contractor.

Welcome to the Hauser Northwest yew bark collector network. We are proud and happy to have your help in this important work.

Sincerely,



Neil A. Jans
President

Bark Harvest

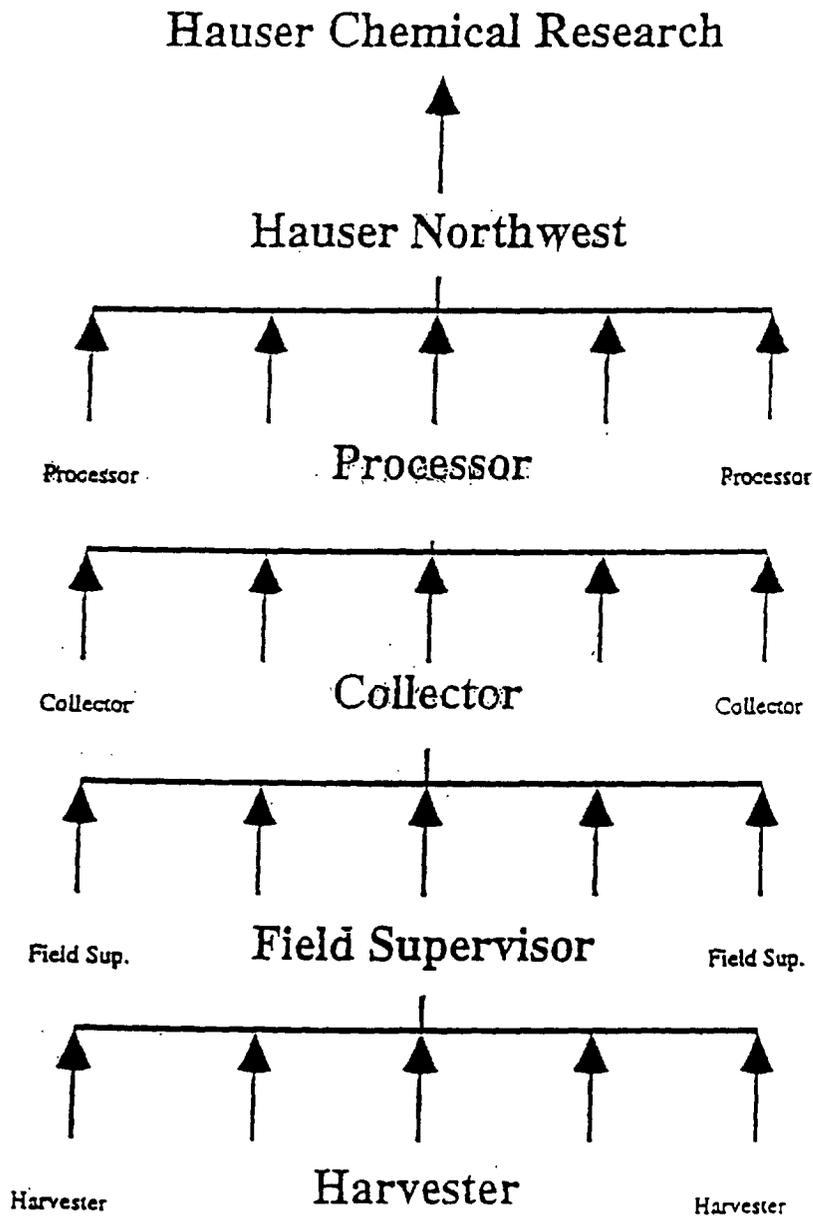
The highest concentration of taxol is found in the bark of Pacific yew trees and, at this time, bark is the ~~only~~ FDA authorized raw material for production of taxol for human use. Bark is gathered by hand peeling bark between April and September or by mechanically peeling bark the rest of the year. Hand peeling during the months when the bark is loose is the most practical, efficient, and cost effective method of bark collection. Mechanical peeling or debarking during the months when the bark is tight is much more costly.

Hand peeling of bark is accomplished by cutting the tree, scoring the bark along the trunk or limb, and peeling off the bark with a flat peeling tool. Bark is gathered into bags, labeled, and transported to a processing facility. Processing requires bark to be manufactured to FDA approved specifications.

Hauser requires bark to be harvested in an environmentally sound manner, but what do we mean? It means that contractors working for Hauser will meet or exceed all harvest regulations designed to minimize disturbance to the environment. These regulations include rules to protect soil, water and wildlife. But it also means Hauser contractors will abide by all other landowner and agency rules concerning camping, litter and garbage disposal.

Hauser takes pride in the work we are doing to make taxol available for cancer treatment and research. We also take pride in the harvest process to collect bark, the raw material necessary for taxol production.

Hauser Northwest Collection Network



Hauser Network

Hauser Chemical Research, Inc. of Boulder, Colorado, has been designated by Bristol-Myers Squibb to collect the bark of the Pacific yew (*Taxus brevifolia*) for production of taxol for human use. Hauser Northwest, Inc. was created as a subsidiary in Cottage Grove, Oregon to manage the actual bark collection and processing.

Hauser Northwest, Inc. has one job to do, and that is to collect and process the bark of the Pacific yew in an efficient, legal and environmentally sensitive manner. The company accomplishes that goal through the use of independent contractors, called collectors who harvest, document and deliver yew bark to processing facilities located throughout the Northwest.

Collectors usually hire harvesters who actually peel the bark from yew trees. Collectors manage the harvester through a harvest supervisor who is responsible for overseeing each unit of operation. Collectors deliver peeled bark to a designated processor who is responsible for sizing, drying and shipping bark according to Hauser Northwest specifications.

Hauser Collector Network

Hauser Northwest	Bark producer for Hauser Chemical Research, Inc.
Processor	Dries, chips, and ships bark to Hauser Chemical Research, Inc.
Collector	Oversees field operation and delivers bark to processor.
Field Supervisor	Supervises a team of bark harvesters.
Harvester	Peels bark

Each person has specific duties that are outlined, but not limited, to those listed below. The specific duties of Collectors and Field Supervisors included in this handbook.

Collector

Collectors are independent contractors who meet the requirements defined by Hauser Northwest and the laws of several states. Nor are approved yew bark collectors employees of Hauser Northwest, Inc. Both are independent business people who meet the definition of "independent contractor" in the state where they are located. That means that collectors are not under the direct control of Hauser Northwest, Inc. as employees, but are free to accomplish the job of collecting yew bark in the manner in which they deem appropriate. They must meet all legal requirements for yew bark harvesting, and consistently meet or exceed Hauser Northwest and landowner harvesting guidelines.

Collectors must meet all applicable tests for independent contractor status. Individuals should contact their attorney for the specific requirements for the state in which they operate. Some of the tests may require independent contractors to:

- obtain all the necessary state and local business licenses;
- supply transportation for crews when required by landowner;
- furnish all the necessary tools and equipment to do the job;
- handle all personnel requirements, including hiring employees sufficient to accomplish harvesting targets;
- Supply transportation to and from the work site unless otherwise agreed;
- maintain current business records that meet local, state and federal requirements;
- provide continuous workers' compensation insurance coverage for all employees and evidence of continuous coverage.

While Hauser Northwest does not control the time, method or manner of collecting yew bark by independent contractors, it can and does require specific results. Those results include but are not limited to:

- Collection of specified quantities of yew bark within specified periods.
- Compliance with all private, local, state and federal permit and other collection requirements including but not limited to:
 - Private, state and federal forest practices requirements, and
 - Private, state and federal fire requirements, and
 - State and federal Occupational Safety Health Administration requirements.
- Responsibility for securing permits in Hauser Northwest's name from land owners that allow collection of yew bark and responsibility for maintenance of successful working relations with those land owners.

- Responsibility for use of environmentally sensitive collection methods that meet or exceed procedural requirements established by the landowner or Hauser Northwest.
- Control, supervision and monitoring of subcontractors and employees.
- Inspection of units to ensure adherence to utilization standards for all bark collection areas.
- Documentation of the source and quantity of bark harvested pursuant to Hauser Northwest, Inc. permits, contracts and agreements.
- Survey of units to be harvested and transfer of information to Hauser Northwest to document yew bark sources.

Collectors must be able to meet or exceed basic specifications and guidelines for yew bark quantity, condition and method of collection. These specifications and guidelines are designed to assure that yew bark will be collected legally and in an environmentally sensitive manner.

Harvest Supervisor

The field supervisor is designated by the collector and is responsible for direction and supervision of the crew on an area basis. A supervisor must be designated at each collection site who is responsible for weighing bark as it is collected, certifying that bark is that of *Taxus brevifolia*, and is accountable for the harvest permit and map, bag tags and trip tickets. The harvest supervisor assures that his crew of harvesters adheres to regulations, laws and landowner requirements concerning bark collection and must deliver peeled bark to the collector.

Harvester

The harvester peels and collects the bark and must work directly in cooperation with the field supervisor to ensure that all peelable bark meeting the current utilization standard is collected. Bark must be clean, free of contamination, and certified to be that of the Pacific yew.

Supply Agreement

Before being accepted as a Hauser Northwest bark collector, a supply agreement must be signed. The supply agreement is intended to govern the terms and conditions of bark purchase. A sample specific to Oregon follows.

AGREEMENT
(OREGON)

PARTIES:

HAUSER NORTHWEST, INC. (Hauser)
78120 Highway 99 South
Cottage Grove, OR 97424

_____ (Collector)

RECITALS:

A. Hauser seeks to obtain from the Collector an amount of yew bark specified in a purchase order to be furnished to the Collector. The Collector is designated by Hauser Northwest and must meet all requirements in the collector handbook as well as the conditions of this agreement.

AGREEMENTS:

1. PURCHASE ORDERS. Hauser shall issue to the Collector a purchase order specifying the amount and unit rate of the yew bark to be delivered by the Collector to Hauser. In addition, the purchase order may also set forth additional terms and conditions of the purchase.
2. LAWFUL HARVEST. The Collector must provide to Hauser proof satisfactory to Hauser and to the applicable landowner that any yew bark provided by the Collector to Hauser was lawfully removed from either public or private lands in accordance with a written permit. In the event that the Collector is unable to provide such satisfactory proof, Hauser may require that the Collector provide Hauser with proof of the Collector's identification, such as a photograph of the Collector and a description of the Collector's vehicle to be used in the harvesting of the yew bark. Such requirements may be imposed as a condition to the future purchase of additional yew bark by Hauser from the Collector.
3. LABOR AND EQUIPMENT. The Collector must provide all labor, equipment and transportation necessary to harvest and deliver the yew bark to Hauser at its location specified above (Some private landowners require crew transportation).
4. METHODS AND HOURS. The Collector is free to determine the means and methods that will be used to harvest and deliver the yew bark to Hauser; provided that the Collector shall comply with all government and landowner requirements and guidelines including but not limited to determination of harvest sites, volumes and stump height. Copies of some of the relevant governmental and landowner requirements are attached to this agreement. In addition, the Collector shall provide proof satisfactory to Hauser and the applicable landowner that all government and landowner record keeping requirements have been met. The Collector is free to set their own hours and to perform services for others.

5. WORKERS' COMPENSATION. If the Collector intends to employ an individual, other than the Collector if the Collector is an individual, for the purpose of harvesting and delivering the yew bark to Hauser, the Collector agrees that it will provide current workers' compensation coverage on all of the individuals performing work for the Collector with the following exceptions:

a. If the Collector is a corporation, officers of the Collector, who are also directors and have a substantial ownership interest in Collector, need not be covered by workers' compensation coverage providing each such officer execute the indemnification provisions of this agreement.

b. If the Collector is a partnership or a sole proprietor, the partners or the individual who is the sole proprietor need not be covered by workers' compensation coverage, provided that they each execute the indemnification provisions of this contract.

6. PERFORMANCE BOND OR LETTER OF CREDIT. The Collector shall post a Performance Bond or Letter of Credit of acceptable grade to Hauser, in the amount of \$ _____. If Collector should fail to perform all of Collector's obligations under this contract, then Collector shall, at the option of Hauser, forfeit to Hauser all of said Performance Bond or Letter of Credit as liquidated damages, or an amount determined by Hauser to be equal to the damages incurred therefore; provided, however, if actual damages should exceed the amount of such bond then Hauser shall not be limited to such remedy.

7. LIABILITY INSURANCE. The Collector shall obtain and maintain during the term hereof:

a. liability insurance covering all motor vehicles exercising rights under this permit, with limits not less than \$100,000.00 for bodily injury and \$300,000.00 for property damage, and

b. liability insurance covering all operations, other than motor vehicle operations as set forth above, in the exercise of rights under this contract or on lands in the vicinity of operations allowed under this contract, including contractually assumed liabilities and third party fire and property damage coverage, with limits not less than \$100,000.00 for bodily injury and \$300,000.00 for property damage.

Such insurance shall be issued by an insurance company acceptable to Hauser, and shall include an endorsement requiring thirty (30) day's notice to Hauser prior to cancellation.

8. PROOF OF WORKERS' COMPENSATION COVERAGE AND PERFORMANCE BOND OR LETTER OF CREDIT AND LIABILITY INSURANCE. The Collector shall provide to Hauser proof of the Collector's compliance with paragraphs 5, 6 and 7 above. A list of all employees who will harvest and deliver yew bark to Hauser and proof of workers' compensation coverage shall be provided to Hauser prior to the beginning of any harvesting of yew bark to be sold to Hauser and prior to any purchase by Hauser of yew bark from the Collector. If the Collector intends to hire an employee after the beginning of harvesting, Collector must notify Hauser before that employee begins harvesting or delivering yew bark and Collector must provide Hauser with proof of workers' compensation coverage before that employee begins harvesting or delivering yew bark.