

K.G.3.1.5# - SALE OPERATION SCHEDULE. (9/04) Unless otherwise agreed to between Contractor and Forest Service, Contractor's Operations shall be performed in accordance with the following schedule.

SALE OPERATION SCHEDULE

Subdivision	Operating Conditions	Purpose
2	Skyline yarding operations and Temporary Road work shall be restricted to August 6 through October 15.	<u>1/</u> , <u>4/</u>
3	Skyline yarding operations and Temporary Road work shall be restricted to August 6 through October 15 except for all landings on road 2400848. Skyline yarding operations on all landings on road 2400848 shall be restricted to August 6 through February 28.	<u>1/</u> , <u>4/</u> <u>1/</u>
1, 4, 5	Skyline yarding operations shall be restricted to October 1 through February 28. Temporary Road work shall be restricted to August 6 through October 15.	<u>1/</u> <u>1/</u> , <u>4/</u>
6	Skyline yarding operations shall be restricted to August 6 through February 28 except for landings on Road 24. All yarding operations shall be restricted to October 1 through February 28 for landings on Road 24. Temporary Road work shall be restricted to August 6 through October 15.	<u>1/</u> <u>1/</u> <u>1/</u> , <u>4/</u>
9	Skyline yarding operations shall be restricted to August 6 through February 28. Temporary Road work shall be restricted to August 6 through October 15.	<u>1/</u> <u>1/</u> , <u>4/</u>
13, 15	Skyline yarding operations and Temporary Road work shall be restricted to August 6 through October 30.	<u>1/</u> , <u>4/</u>
10, 11, 17	Skyline yarding operations and Temporary Road work shall be restricted to July 8 through September 30.	<u>3/</u> , <u>4/</u>
14	Skyline yarding operations and Temporary Road work shall be restricted to August 6 through October 31.	<u>1/</u> , <u>4/</u>
16	Skyline yarding operations shall be restricted to July 8 through February 28. Temporary Road work shall be restricted to July 8 through October 15.	<u>3/</u> <u>3/</u> , <u>4/</u>
1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 15	Helicopter yarding operations shall be restricted to October 1 through February 28.	<u>1/</u>
All	Installing and removing culverts shall be restricted to July 8 through September 15.	<u>1/</u> , <u>4/</u>
R/W	Specified Road Reconstruction shall be restricted to August 6 through September 30.	<u>1/</u> , <u>4/</u>
All	All operations between July 8 and September 15 shall be restricted to two hours after sunrise to two hours before sunset.	<u>2/</u>
All	Per G.3.5, off-road equipment shall be cleaned prior to coming onto the Sale Area.	<u>5/</u>

1/ To minimize disturbance to Marbled Murrelets and Spotted owls during the nesting season.

2/ To minimize disturbance to Marbled Murrelets during the nesting season.

3/ To minimize disturbance to Spotted owls during the nesting season.

4/ To minimize streamcourse sedimentation due to wet weather operations.

5/ To reduce introduction of noxious weeds of concern.

K.G.4.1# - SPECIFIC REQUIREMENTS. (9/04) Notwithstanding G.4.1, G.4.1.1, G.5 and G.6.1, felling objectives shall be accomplished by the type of felling methods and equipment listed herein. Methods or equipment other than those specified may be approved. For Subdivisions shown in the following table, Contractor shall submit a cutting plan for Forest Service acceptance, prior to the start of felling operations.

TABLE PURSUANT TO K.G.4.1# - SPECIFIC REQUIREMENTS (9/2004)

<u>FELLING METHODS</u>	<u>SUBDIVISIONS</u>
Trees shall be felled away from Streamcourses, buffers, powerlines, and trails and shall be felled to the lead of cable corridors.	All

<u>FELLING EQUIPMENT</u>	<u>SUBDIVISIONS</u>
Chainsaw and wedges.	All

K.G.4.1.2 - STUMP MARKS. (9/04) Unless otherwise agreed, Contractor shall cut two grooves in the tops of all stumps with indications of laminated root rot (*Phellinus weirii*) within 1 hour of felling.

Grooves shall be in the top of the stump, parallel to each other, 2 inches deep and 6 inches apart.

Indications of laminated root rot (*Phellinus weirii*) are:

1. Reddish-brown stain in a crescent or irregular shaped area.
2. Laminated decay that separates readily at the growth rings.

Before cutting any trees in areas shown on Contract Area Map as subject to this provision, Contractor shall obtain and furnish each faller with a copy of a guide to be used in determining which stumps need to be cut into in the manner described above. The title of the guide is "Recognizing Laminated Root Rot in Freshly-Cut Douglas-fir stumps." It will be furnished by Forest Service. Contractor shall require fallers to carry and use the guide for the purpose intended when falling trees in areas subject to this provision.

K.G.4.2# - YARDING/SKIDDING REQUIREMENTS. (9/04) Contractor shall submit for Forest Service approval a Yarding/Skidding Plan prior to the start of felling operations. Requirements other than those specified in the following table may be approved. When appropriate, such approval shall include adjustments in Current Contract Rates and revision of the Contract Area Map. In no such case shall the adjustments result in Current Contract Rates less than Base Rates.

Location of all skid roads and trails, tractor roads, skyline corridors, mechanized harvester trails, forwarder roads, and other log skidding facilities, shall be approved prior to their use or construction.

TABLE PURSUANT TO K.G.4.2# - YARDING/SKIDDING REQUIREMENTS (09/2004)

<u>YARDING/SKIDDING REQUIREMENTS</u>	<u>SUBDIVISIONS</u>
1. A skyline system capable of transporting logs at least 1300 feet (rigging length of 1440 feet).	1, 2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17
2. A skyline system capable of keeping one end of the log suspended during inhaul, capable of lateral yarding up to 120 feet, capable of downhill yarding, and capable of operating in a multispan configuration.	1, 2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17
3. When yarding across designated streamcourses, system must be capable of keeping the entire length of logs fully suspended above the ground 50 feet each side of the streamcourse during inhaul.	1, 2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17
4. When skyline corridors pass through stream buffers, skyline corridors will be spaced so that no more than 20% of the existing canopy in the buffers will be removed in any given 1,000 foot reach of stream.	2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17
5. Logs may drop on the ground within 100 feet of slope distance of tail-holds and 50 feet of slope distance of landings.	2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17
6. Location of cableways shall be approved by the State of Alaska. The minimum corridor spacing shall be 100 feet at the far end with a maximum corridor width of 12 feet.	2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17
7. A carriage capable of maintaining a fixed position on the skyline while lateral yarding up to 120 feet on either side of the skyline and capable of passing supports when intermediate supports are used.	1, 2, 3, 4, 5, 6, 9, 10, 11, 13, 14, 15, 16, 17
8. Tree length logging is prohibited.	All
9. A Helicopter logging system capable of hovering and lifting at least 4,800 pounds and transporting logs at least 5,500 feet (secondary log landing).	1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 15, 17
10. The Helicopter logging system is required to maintain full suspension during all phases of in-haul of designated timber from within the designated subdivisions, over and adjacent to designated streamcourses and the approach to the designated landings.	1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 15, 17
11. Prior to all operations commencing, Contractor will provide an operating plan that outlines and identifies all proposed operations in relation to the Sweet Creek Trail adjacent to subdivision.	12, 15
12. Prior to all operations commencing, Contractor will coordinate with local utilities company to acquire required permits or approval to disengage or modify existing power facilities to accomplish proposed logging activities.	12, 15
13. Flaggers will be required when logging operations are adjacent to Forest Service Roads 24, 48 and 2480.	4, 5, 6, 14, 10, 11, 12, 15

K.G.6# - EROSION CONTROL AND SOIL TREATMENT BY CONTRACTOR. (9/04) Erosion prevention and control work required by G.6, shall be completed within 15 calendar days after yarding/skidding operations related to each landing are substantially completed or after Forest Service designation on the ground of work where such designation is required hereunder. Said time limit shall be exclusive of full days lost in Contractor's Operations due to causes beyond Contractor's control. Such on the ground designation shall be done as promptly as feasible unless it is agreed that the location of such work can be established without marking on the ground. After September 15, and as long thereafter as operations continue, the work shall be done as promptly as practicable. Damage resulting from Contractor's Operations due to failure to perform required work shall be repaired by Contractor.

On slopes greater than 30 percent, erosion control measures will be done with methods other than mechanized equipment, unless otherwise agreed.

Where soil has been disturbed or displaced on Sale Area by Contractor's Operations and where measures described in G.6 will not result in satisfactory erosion control where such marking is shown on Contract Area Map, the following shall be performed. If applicable, timing of the work shall be coordinated with required scarification or subsoiling.

(a) Where staked or otherwise marked on the ground by Forest Service, seed, fertilizer, and mulch will be applied as specified in the attached seeding, fertilizing, and mulching schedule. All applications shall be current and occurring during the period from September 15 to October 15 unless otherwise agreed to. Applications shall be the only ones during favorable conditions. Contractor and Forest Service agree, seed can be applied and covered within 10 days of disturbance, and may be done outside the required periods.

(b) Where shown on Contract Area Map, landings, Temporary Roads and/or skidtrails/roads shall be scarified to a depth of NA inches to provide a seedbed for grass seed, fertilizer, and mulch. Seed, fertilizer, and mulch shall be spread evenly at the rates shown in the table. When the seed, fertilizer, and mulch are applied in separate operations, the second or third operations shall be within 10 days of the first or second.

(c) Where shown on Contract Area Map, landings, Temporary Roads, and skid trails/roads used by Contractor shall be subsoiled to a minimum depth of 20 inches, except that Forest Service may agree to lesser depths. Each subsoiler shank shall be equipped with a shoe and wings which has a total width of at least 18 inches. The design of the shank and wings will be such that the treated, compacted soil is slightly lifted and well-fractured rather than plowed, mixed, or displaced. The distance between subsoiler shank passes shall not exceed 36 inches. Treated areas shall span the total width of compaction. Subsoiling shall be kept reasonably current and shall be done during Normal Operating Season unless otherwise agreed.

(d) When agreed to, Contractor may use alternate methods of erosion control.

Seed shall meet current Forest Service requirements, with the additional requirement that no seed containing any noxious weed seed in excess of established state limitations as listed in the current "State Noxious Weed Requirements Recognized in the Administration of the Federal Seed Act" publication will be used (commonly referred to as the "all states" noxious weed seed list). Seed shall be furnished separately or in mixture in standard containers clearly marked with: (1) seed name; (2) lot number; (3) net weight; (4) percentages of purity and of germination (in case of legumes, percentage of germination to include hard seed); (5) percentage of weed seed content; and (6) certification that no noxious weed seeds in excess of established state standards are present. The contractor shall furnish the Government duplicate signed copies of a certificate, signed by a Registered Seed Technologist or Seed Analyst (certified through either the Association of Official Seed Analysis or the Society of Commercial Seed Technologists), certifying that each lot of seed has been tested in accordance with the Association of Official Seed Analysts Standards within 12 months prior to date of application. This certificate shall include (1) name and address of labo-

ratory, (2) date of test, (3) lot number for each kind of seed, (4) name of seed, (5) percentage of germination, (6) percentage of purity, (7) percentage of weed seed content, and (8) certification that no noxious weed seeds in excess of established state limitations are present in any kind of seed.

Legume seed shall be inoculated with approved cultures in accordance with the instructions of the manufacturer.

No seed may be applied without prior written approval by the government.

APPLICATION SCHEDULE PURSUANT TO K.G.6# - EROSION CONTROL AND SOIL TREATMENT BY CONTRACTOR (09/2004)

SUBDIVISION OR UNIT NUMBER	AREAS A) SKID TRAILS B) FIRELINES C) TEMP. ROADS D) LANDINGS E) OTHER	SEED		FERTILIZER		MULCH	
		APPLICATION		APPLICATION		APPLICATION	
		SPECIES MIXTURE	LBS/AC	TYPE ^{2/}	LBS/AC	TYPE	LBS/AC
All	B, C, D	<u>1/</u>	22	16-20-16	150	None	

1/ Blue Wild Rye grass seed will be provided by the Forest Service. A co-op deposit of \$ 0.08/Ton will be collected to cover the cost of the seed.

2/ Fertilizer shall be a standard commercial fertilizer with guaranteed analysis of contents clearly marked on containers.

K.G.7 - SLASH DISPOSAL. (9/04) As used in the following Subsections, the term "slash" is vegetative debris including, but not limited to, cull logs, blasted or pushed-out stumps, chunks, broken tops, limbs, branches, rotten wood, damaged brush, damaged or destroyed reproduction, saplings or poles, resulting from Contractor's Operations, including construction of roads or other improvements under this contract. Slash resulting from the construction of Specified Roads shall be disposed of as provided for in Section 201 of the Standard and Special Specifications and as shown in Drawings.

Any burning of slash or refuse by Contractor is subject to K.H.2.0.1.

Forest Service may agree to substitute methods of slash disposal if such substitute methods will give equally satisfactory results.

Forest Service may waive specific slash treatment requirements. Contractor's Timber Sale Account will be charged for any slash treatment requirements waived or for work taken over by Forest Service. The amount of such charges will be determined by Forest Service if Contractor has not begun felling operations. If felling operations have begun, charges will be determined by mutual agreement.

Forest Service may enter into a written agreement with the Contractor for the Contractor to complete slash disposal work originally scheduled to be done by the Forest Service. The agreement will describe the work to be completed by the Contractor, and the value of such work. Value of the work to be done will be based upon the slash disposal plan in which the cooperative deposits were calculated, and will include Forest Service overhead. Any deposits paid by the Contractor for this work will be credited to the Contractor's timber sale account. This work is in addition to that required by K.G.7.4#.

K.G.7.4# - SLASH TREATMENT REQUIREMENTS. (9/04) Contractor shall pile, burn, yard, construct firelines or otherwise treat slash defined in K.G.7, within designated areas. Work required of Contractor shall be in accordance with the following slash plan and specifications, and the Contract Area Map.

Unless otherwise agreed, or shown in the attached slash plan or specifications, when Included Timber is removed during Normal Operating Season, required slash work shall be completed within 30 days of removal of approximately three-quarters of the volume in the unit. When Included Timber is removed outside Normal Operating Season, required work will be completed within 30 days of the beginning of the next Normal Operating Season.

SPECIFICATIONS PURSUANT TO K.G.7.4# SLASH TREATMENT REQUIREMENTS (09/2004)

CONSTRUCTION SLASH

DEFINITION Construction Slash is defined as all grubbed stumps and all woody material resulting from Contractor's construction of temporary roads, decking areas, landings, or other clearings meeting the following size specifications:

8 inches or more in diameter and 10 feet or more in length.

SPECIFIC DISPOSAL METHOD Contractor shall pile or scatter all Construction Slash as defined above.

Construction Slash shall be scattered outside the temporary road clearing limits without damaging trees. All logs shall be limbed. Logs and stumps shall be placed away from trees, positioned so they will not roll, and not be placed on top of one another.

In no event will Construction Slash be buried under temporary road or landing embankments.

MACHINE PILE LANDINGS

1. AREA SUBJECT TO THIS PROVISION. All landings and the area within 10 feet of the perimeter of these landings shall be machine piled.

2. METHOD OF TREATMENT. All slash shall be placed in a compact, dirt free, uniform pile for later disposal by Forest Service. Pieces exceeding 8 inches on the big end and 10 feet long shall be placed parallel to each other in piles similar to log decks. All pieces shall be placed so that shifting or rolling will not occur and so that no material will extend over the edge of disposal areas. Piles shall be no higher than 10 feet. Unless otherwise agreed, piles shall be no wider than 20 feet nor longer than 30 feet and shall be constructed with normal log loading equipment or equivalent.

3. LOCATION OF PILES.

- a. Piles shall be located at least 20 feet from adjacent standing timber.
- b. Unless otherwise agreed, piles shall be placed on landings used with the sale, disposal areas designated on the Contract Area Map or other areas as designated by the Forest Service.

4. TIMING OF PILES. Piling of slash shall be done concurrent with yarding on each landing, or within 10 days of completion of yarding on each landing.
5. Pursuant to K.G.7 the following rate will be used to determine charges for measures mentioned above that are waived or taken over by Forest Service: \$188.02/Landing to machine pile landings.

HANDPILING

1. SLASH SPECIFICATION. All logging slash more than 2 feet long and between 1/2 inch and 3 inches in diameter at the large end shall be handpiled. Larger material which has a portion meeting this specification must be bucked at the 3 inch diameter and that portion piled.
2. AREA SUBJECT TO THIS PROVISION. All slash inside Logging Unit and 10 that is within 25 feet of Roads 24 meeting above specification shall be handpiled.
3. CONSTRUCTION OF PILES. All piles shall be compact and free of dirt with a height no higher than 2/3 the diameter.
4. LOCATION OF PILES. Piles shall be located away from the outer edge of tree crowns and snags.
5. Pursuant to K.G.7 the following rate will be used to determine charges for measures mentioned above that are waived or taken over by Forest Service: \$781.17/Acre for handpiling

K-G.8.1.6# – SCALING DEPOSITS. (4/04) In the event Forest Service enters into contracts with another party to provide Scaling services, Contractor shall make Required Deposits in cash to Forest Service for such contract Scaling services at the following rates:

Scaling Deposit Schedule

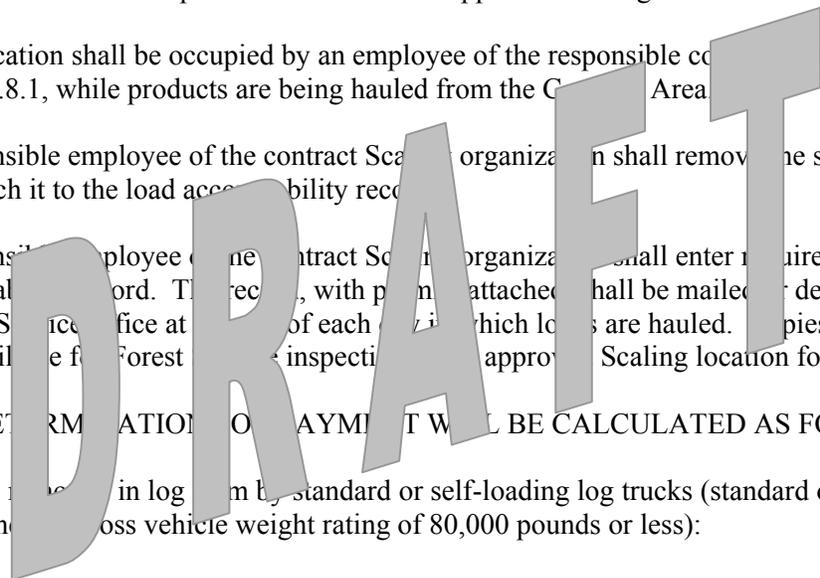
	Rate per Load for Scaling Services under A.10		
Type of Service:	Standard	Overtime	Holiday
Yard Scaled Loads	NA	NA	NA
Truck Scaled Loads	NA	NA	NA
Non-Scale Loads	NA	NA	NA
Weighing Services	NA	NA	NA
Load Count	\$20.00	\$20.00	\$30.00

The standard rate applies Monday through Friday between 6 a.m. and 8 p.m. The holiday rate applies on Federal holidays. The overtime rate applies at all other times.

Such deposits shall be paid in advance of Scaling. By written notice, Forest Service may adjust such rates to reflect redetermined costs. By agreement, and pursuant to Contractor’s Technical Proposal and annual Operating Schedule, deposits for Scaling services may be paid in total or be based on the estimated amount to be Scaled in not less than 30 days and not more than 60 days, unless production exceeds haul estimates. Contractor’s failure to make advanced deposits when due shall be a breach of contract under J.3. Refunds after Scaling is completed shall be made pursuant to E.2.4.

K.G.8.3# (OPTION 1) - SPECIAL SCALING INSTRUCTIONS. (9/04) Prior to leaving loading area, Product Removal Permits shall be attached in accordance with the instructions on the inside cover of the Product Removal Permit book. When products are manufactured on site and removed as chips, the permit shall be attached to a 12" X 18" vertically mounted board on the front panel on the driver's side of the conveyance unit. The previously validated Product Removal Permit shall be removed from the board before attaching a new permit. The board's texture, density, and thickness shall be such as to accommodate construction type staples and be of durable material for securing the attached permits. Notwithstanding the requirements of G.8.4, the following stipulations apply:

1. All loaded trucks shall stop at the Forest Service approved Scaling location.
2. Scaling location shall be occupied by an employee of the responsible contracting organization, as specified in G.8.1, while products are being hauled from the Chopper Area.
3. The responsible employee of the contract Scaling organization shall remove the scaler permit from the load and attach it to the load accountability record.
4. The responsible employee of the contract Scaling organization shall enter required information on the load accountability record. The records, with permit attached, shall be mailed or delivered to the appropriate Forest Service office at the end of each month in which loads are hauled. Copies of the records shall be kept available for Forest Service inspection at approved Scaling location for 10 working days.



I. VOLUME DETERMINATION OF PAYMENT WILL BE CALCULATED AS FOLLOWS:

A. For products removed in log form by standard or self-loading log trucks (standard or self loading truck size is defined as gross vehicle weight rating of 80,000 pounds or less):

Conversion Factor Ton/Load, Logs for standard or self-loading log trucks: 26 Tons/Load

Total Ton volume: Total loads X Conversion Factor Ton/Load, Logs

Use of another vehicle type to haul the material, other than by a standard log truck, shall be approved by the Forest Service prior to hauling. Forest Service shall determine volume(s) and conversion factor which shall be applied to loads being removed.

B. For products removed in chip form by chip van or trailer conveyance units:

Conversion Factor CCF/LF, Chips for chip van or trailer conveyance units: NA.

Total CCF volume: Total loads X Conversion Factor CCF/LF, Chips

The length of each van or trailer will be measured to nearest whole foot and recorded on the load accountability record, as per Item 4 above, by the responsible employee of the contract Scaling organization. All van and trailer lengths recorded during the month will be totaled at the end of each month. Total lineal feet will be calculated and rounded to nearest CCF at the close of each business month.

K-G.9# – STEWARDSHIP PROJECTS. (4/04) Performance of stewardship projects shall be in accordance with the following specifications.

See attached Stewardship Project Specification.

K.H.1 - PLANS. (9/04) The plan shall state how Contractor's representative or alternates will be contacted in a fire emergency, both during periods of operation and at other times such as evenings or weekends. Contractor shall certify compliance with specific fire precautionary measures included as Subsections under K.H.2 - Specific Fire Precautions, before beginning operations during Fire Precautionary Period (closed season) and shall update such certification when operations change.

If helicopter yarding is required, the plan shall include a schedule of rates mutually agreed to for computing Contractor costs incurred toward meeting Contractor's obligation under contract for paying for helicopters controlled by Contractor and used under Forest Service contract for suppressing Operations Fires or other fires on Sale Area, excluding Negligent Fire.

K.H.1.1 - ADDITIONAL AREA OF FIRE RESPONSIBILITY. (9/04) The area within 200 feet slope distance of the center line of road constructed or reconstructed under this contract on National Forest lands outside of Sale Area shall be considered a part of Sale Area in connection with responsibilities under H.1 and H.2 until such time as it has been accepted in writing by Forest Service.

K.H.2 - SPECIFIC FIRE PRECAUTIONS. (9/04) When the industrial fire precaution level is I or higher, unless waiver is granted under K.H.2.2, specific required fire precautionary measures are as follows:

A. Fire Security.

Contractor shall designate in writing a person or persons who shall perform fire security services listed below on Sale Area and vicinity. The designated person will be capable of operating Contractor's communications and fire fighting equipment specified in the contract, excluding helicopters, and of directing the activities of Contractor's personnel on Forest fires. Such person must report any fire detected to Forest Service within 15 minutes of detection. In lieu of having the designated person perform the required supervisory duties, Contractor may provide another person meeting the qualifications stated above to direct the activities of Contractor's personnel and equipment during all fire fighting activities.

Services described shall be for at least 1 hour from the time Contractor's Operations are shut down. For the purposes of this provision, personnel servicing equipment, and their vehicles, who are not engaged in cutting or welding metal are excluded.

Fire security services shall consist of moving throughout the operation area or areas constantly looking, reporting, and taking suppression action on any fires detected. Where possible, the designated person shall observe inaccessible portions of helicopter operating areas from vantage points within or adjacent to Contract Area.

Contractor shall furnish fire security services based on the predicted industrial precaution level, obtained by Contractor from the appropriate Ranger District Headquarters. If predictions made after 6:00 p.m. local time, are significantly different than originally estimated, Forest Service will inform Contractor when changes in fire security services are indicated.

B. Fire Extinguisher and Equipment (on Trucks, Tractors, Power Saws, etc.).

(a) Each yarder or loader equipped with an internal combustion engine or other spark emitting source shall be equipped with a readily accessible fire extinguisher, with an Underwriter's Laboratory (UL) Rating of at least 5 B,C.

(b) All power-driven equipment operated by Contractor on National Forest land, except portable fire pumps, shall be equipped with one fire extinguisher having a UL rating of at least 5 B,C and one "D" handled or long handled round point shovel, size O or larger. In addition, each motor patrol, truck and passenger-carrying vehicle shall be equipped with a double-bit axe or Pulaski, 3-1/2 pounds or larger.

(c) Equipment required in (a) and (b) shall be kept in a serviceable condition and shall be readily available.

(d) Each gasoline power saw operator shall be equipped with one pressurized chemical fire extinguisher of not less than 8-ounce capacity by weight, and one long handled round point shovel, size O or larger, except at a landing where a suitable extinguisher and shovel are immediately available. The extinguisher will be kept in possession of the saw operator at all times. The shovel shall be accessible to the operator within 10 feet.

(e) Each helicopter shall be equipped with one fire extinguisher having a UL rating of at least 5 B,C mounted inside the cabin within reach of the pilot's operating position.

(f) One refill for each type or class of fire extinguisher sufficient to replace each size extinguisher required on equipment shall be safely stored in the fire tool box or other agreed upon place on Sale Area that is protected and readily available.

(g) At each area where helicopters are being serviced or supplied, a carbon dioxide fire extinguisher with a UL rating of at least 20 B,C will be provided on the site and placed where it is available for immediate use.

C. Spark arresters and mufflers.

Each internal combustion engine shall be equipped with a spark arrester qualified and rated under USDA Forest Service Standard 5100-1a as shown in the National Wildfire Coordination Group Spark Arrester Guide, unless it is:

(a) Equipped with a turbine-driven exhaust supercharger such as the turbocharger. There shall be no exhaust bypass.

(b) A multi-position engine, such as on power saws which must meet the performance levels set forth in the Society of Automotive Engineers (SAE) "multi-positioned small engine exhaust fire ignition standard, SAE recommended practice J335B" as now or hereafter amended.

(c) A passenger carrying vehicle or light truck, or medium truck up to 40,000 GVW, used on roads and equipped with a factory designed muffler complete with baffles and an exhaust system in good working condition.

(d) A heavy duty truck, such as a dump or log truck, or other vehicle used for commercial hauling, used only on roads and equipped with a factory designed muffler and with a vertical stack exhaust system extending above the cab.

Exhaust equipment described in this Subsection, including spark arresters and mufflers, shall be properly installed and constantly maintained in serviceable condition.

D. Fire Tools.

Contractor shall furnish serviceable fire fighting tools in a readily accessible fire tool box or compartment of sound construction with a hinged lid and hasp so arranged that the box can be secured or sealed. The box shall be red and marked "Fire Tools" in letters at least 1 inch high. It shall contain a minimum of:

- (a) Two axes or Pulaskis with a 32 inch handle.
- (b) Three adze eye hoes. One Pulaski may be substituted for one adze eye hoe.
- (c) Three long handled, round point shovels, size 0 or larger.

E. Tank Truck.

Contractor shall provide a tank truck or trailer, containing not less than 300 gallons of water, during yarding, skidding, loading, land clearing, cut-of-way clearing, mechanical falling, and mechanical treatment of slash. Such tank truck or trailer shall be maintained in a serviceable condition and located within 10 minutes, round trip, to each operating side during the Precautionary Period (closed season), except as provided under B.1.

The tank truck or trailer shall be equipped with a pump capable of discharging 20 gallons of water per minute, using a 1 1/2 inch nozzle through a 5 foot length of poly or rubber lined hose. In addition, 500 feet of serviceable hard rubber poly or rubber lined or FJRL hose of not less than 1 inch outside diameter, fitted with a nozzle capable of discharging a straight stream of 1/4 inch diameter and a spray pattern shall be immediately available for use. The tank, pump, nozzle and at least 250 feet, of the total 500 feet of hose, shall be connected and ready for use at all times. Synthetic hose may be used by agreement.

If a trailer is used, it shall be equipped with a hitch to facilitate prompt movement. A serviceable tow vehicle shall be immediately available for attachment to the trailer and must meet the time requirements stated above. Such truck or trailer shall be equipped to operate for a minimum of 8 hours.

Where designated on Contract Area Map, Contractor shall provide a tank trailer or water source and pumping equipment, including accessories, which can be lifted and transported by the yarding system. The component parts shall meet all specifications above. The tank trailer or water supply and pumping accessories shall be deliverable to a fire, in area of operations, within 15 minutes of detection.

In lieu of the above tank trailer or water supply for helicopter operations, Contractor may provide a suitable helicopter water bucket with a 300 gallon capacity. When Contractor provides a water bucket, a water source shall be provided within 5 minutes round trip flight time from operating side.

F. Communications.

During Contractor's Operations, excluding powersaw falling and bucking, Contractor shall provide adequate two-way communication facilities to report a fire to Forest Service within 15 minutes of detection. Citizen Band radios (CB's) are not considered adequate two-way communications because FCC Regulations prohibit commercial use.

G. Smoking and Open Fire Restrictions.

Smoking and fires shall be permitted only at the option of Contractor. Contractor shall not permit open fires on Sale Area without advance permission in writing from Forest Service.

H. Blasting.

Blasting shall be permitted only for road construction purposes unless advance permission is obtained from Forest Service.

Whenever the Industrial Fire Precaution Level is II or greater, a fire security person equipped with a long handled round point No. 0 or larger shovel and a 5 gallon backpack pump can filled with water, will stay at location of blast for 1 hour after blasting is done. Blasting may be suspended by Forest Service, in areas of high rate of spread and resistance to control.

Fuses shall not be used for blasting. Explosive cords shall not be used without permission of Forest Service, which may specify conditions under which such explosives may be used and cautions to be taken.

I. Compliance with State Fire Laws.

Listing of specific fire precautionary measures in the foregoing Subsections is not intended to relieve Contractor in any way from compliance with State fire laws covering fire prevention and suppression equipment, applicable to Contractor's Operations.

J. Aircraft Communications.

Every aircraft used in conjunction with Contractor's Operations shall be equipped with an operable radio system. The radio system shall be capable of transmitting and receiving on VHF frequency 122.85 Megahertz (MHz) with a minimum output of 5 watts at the transmitter. The system shall be located and installed so that the pilot can operate it while flying. A shielded all-weather broad-band antenna shall be part of the system. Radio and antenna shall be properly installed and maintained.

Upon discovery or notification of a fire on Sale Area, all aircraft pilots controlled by Contractor shall monitor VHF frequency 122.85 MHz when within 5 miles of a fire and broadcast their intentions.

K. Logging Block Equipment.

Contractor shall provide a serviceable 5 gallon backpack pump full of water, one axe, and one long handled round point shovel, size 0 or larger, at each haulback block through which a running line passes.

The area below such blocks must be kept clear of all flammable debris under 4 inches in diameter for a distance of 6 feet in all directions. Material larger than 4 inches that poses a fire risk, such as punky logs, must also be removed.

Contractor shall avoid line-rub on rocks or woody material which may result in sparks or sufficient heat to cause ignition of fire.

K.H.2.0.1 - BURNING BY CONTRACTOR. (9/04) Notwithstanding the Fire Precautionary Period limitation of H.2, Contractor is required to obtain written permission from Forest Service prior to any burning on the National Forest Lands.