

2002 – 2003 – 2004



INTERAGENCY CALL-WHEN-NEEDED



HELICOPTERS



PROJECT: CALL-WHEN-NEEDED MEDIUM AND
HEAVY-LIFT HELICOPTER SERVICES

LOCATION: NATION-WIDE

CONTRACTOR: VARIOUS

AWARDING OFFICE: USDA FOREST SERVICE AND
US DEPARTMENT OF INTERIOR
NATIONAL BUSINESS CENTER
NIFC

www.nifc.gov/contracting

Updated 11/13/2003

CALL-WHEN-NEEDED

MEDIUM AND HEAVY-LIFT NATIONAL HELICOPTER SERVICES

USDA FOREST SERVICE

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National Interagency Fire Center
Boise, ID 83705

(208) 387-5347

US DEPARTMENT OF INTERIOR
NATIONAL BUSINESS CENTER

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This document and contract herein will remain valid until the end of the year 2004.

This document is published to assist helicopter managers in administering call-when-needed (CWN) contracts. Whereas it contains the standard specifications for all CWN aircraft awarded at the time of publication, it may not reflect all CWN aircraft or contracts awarded. Aircraft and contracts not listed herein should be administered in accordance with the awarded contract which contractors are required to have aboard the aircraft at all times. Any questions concerning aircraft or contracts not listed should be referred to one of the Contracting Officers. **This Guide is not an official contract rather a publication to assist the manager in contract administration**

See website for updated/current changes (www.nifc.gov/contracting)

Refer to Section G, page 60 for Helicopter Manager authorities and duties.

Additional copies of this document may be ordered from:

National Interagency Fire Center
ATTN: Supply
3833 S. Development Avenue
Boise, ID 83705-5354

Order NFES #2168
Fax (208) 387-5573

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**United States
Department of
Agriculture**

Forest Service NIFC

**National Interagency
Fire Center
3833 S. Development
Boise, ID 83705**

Reply To: 6320
Date: April, 2002

Call-When-Needed Helicopter Contractors:

The referenced contract with your firm is written to provide Call-When-Needed (CWN) Type I and II Helicopter services to the USDA Forest Service and United States Department of the Interior Bureaus and Agencies. The primary purpose of the service is for firefighting activities. However, administrative use may also be ordered. You will note that two contract numbers are shown on each contract. A contract number beginning with the numerical 55 denotes a Forest Service contract and will be used for all services performed on National Forest lands or State lands where the Forest Service has fire suppression responsibilities. A contract number beginning with the numerical prefix 1406 denotes an Office of Aircraft Service contract and will be used for all services performed on lands under the jurisdiction of the Department of Interior Bureaus of Agencies.

All requests for services under this contract will be ordered by the National Interagency Coordination Center (NICC) in Boise, ID. The call-up and dispatch of Helicopters will be based on the criteria specified in contract clauses F.4, Ordering Services. This clause fully describes the procedures that we will follow to order an aircraft. It is your responsibility to keep the aircraft desk at NICC informed on the location and availability of your Helicopter(s) for fire assignments. The phone number for NICC is 1-800-994-6312. We will assume that if you have not kept the aircraft desk currently informed on the location and status of your aircraft, that they are not available for work under the contract.

As you are aware, the contract are for the use of either "standard" category or "limited/restricted" category Helicopters. The standard category Helicopters can be used for all purposes indicated on the Helicopter Data Card. The use of limited category Helicopters is confined to hauling cargo and performing bucket work. Passengers are not to be carried in either limited or restricted category Helicopters with the following exception: Contractor personnel necessary to the operation of the Helicopter; i.e., mechanic, may be carried on ferry flights to the site of the fire or other project sites. Seats may be installed for this purpose; however, the seats must be removed prior to the beginning of work on a fire or other project. We do not anticipate using a large number of limited/restricted category Type II Helicopters. Consequently, these aircraft may not be inspected and carded until an actual need develops.



CWN Helicopter Contractors

Orders for service will be placed by NICC at the National Interagency Fire Center. When an order is placed and you can respond, please insure that the Helicopter and Pilot furnished is approved for use under the contract. At the beginning of each usage, you will be asked to show the Helicopter and Pilot cards that indicate the necessary approvals.

Each time a Helicopter is furnished, a Government Helicopter manager (foreman) will be assigned to direct use, assist the Contracting Officer in field administration of the contract, and to approve availability and flight times. The Helicopter Manager is not authorized to change or waive contract terms (see contract clauses G.19). The manager is authorized to designate inspectors to assist him/her in management of the Helicopter and administration of the contract.

Responsibility for contract administration rests with me as Contracting Officer. However, procedural matters relating to the usage of the Helicopter and payment processing will be handled by myself and Bob Carr of the Office of Aircraft Services, Department of Interior. I will handle those matters relating to Forest Service usage and Bob will handle those relating to usage by Department of Interior Agencies, Bureaus, and Offices.

Two paying offices for the National Contracts will be used for contract payment. Payment for services provided to the Forest Service will be requested by submitting Form FS-6500-122, Flight Use Report, at the interval stated in the contract to:

USDA Boise National Forest
Attn: Fiscal & Accounting
1249 Vinnell Way, Suite 20
Boise, ID 83709

Payment for services provided to US Department of Interior Bureaus and Agencies will be requested by submitting Form OAS-23, Aircraft Use Report, at the intervals stated in the contract to :

USDI Office of Aircraft Services
PO Box 15428
Boise, ID 83715-5428

When filling out the Form OAS-23, show the **Office of Aircraft Services** contract number.



CWN Helicopter Contractors

The original and one copy of the payment forms will be given to the Helicopter Pilot by the Helicopter Manager. As the Contractor, you are responsible for submitting the forms for payment to the payment offices listed above. Some Department of Interior Bureaus may want to retain the original copy to add authorization coding and correction of errors before submitting to OAS.

Flight invoices originated by the Contractor will not be paid. Additional billing for services and supplies will have to be accomplished on a Company invoice with appropriate receipts and/or documentation attached.

A copy of the contract and all modifications are to be maintained in each Helicopter during its use under this contract.

Prior to putting a CWN Helicopter into service, the manager has been directed to:

1. Review the aircraft log book, in particular, looking for the following:
 - a. 100-hour inspections or periodic inspections completed within the applicable time limits;
 - b. Entries indicating a change of major component and the reason for change; and
 - c. Entries indicating damage to the aircraft.
2. Conduct a thorough walk-around inspection to ascertain that all items of equipment required are installed and operative. Some examples are:
 - a. High visibility paint on main rotor blades
 - b. Seat
3. Request a power check to ascertain that engines are operating within prescribed limits. Procedures outlined in appropriate flight or maintenance manuals, in addition to contract clause C.13 (10) will be used.

Based on our experiences with previous CWN contracts, we request your help as follows:

1. Make sure that a copy of the contract is in each Helicopter when it is called up for use.
2. Fully orient your Pilots to the work performance requirements and the payment terms and processes that are contained in the contract and this letter. Timely payment can be made only if the payment forms are correctly prepared.



CWN Helicopter Contractors

3. Helicopter module personnel have been given general training in the management, operation, and use of Helicopters. However, they may not be familiar with the make, model, specific configuration, and operating envelope or the aircraft furnished for the contract work. Also, they may not be familiar with applicable company procedures regarding the operation of your Helicopter. Accordingly, it is requested that each of your Pilots give the module member assigned to them a complete familiarization briefing about the items listed herein.

Additional copies of the contract may be requested by the Company as needed.

Sincerely,

//Frank Gomez//

FRANK GOMEZ
Contracting Officer

Enclosure

cc: Contracting-Regions 1,2,3,4,5,6,8,9
Fire and Aviation-Regions 1,2,3,4,5,6,8,9
J. Grogan-NIFC
OAS-Contracting
NICC-NIFC
BNF-F & A

FLIGHT USE REPORT DISTRIBUTION/INSTRUCTIONS

The following instructions are to be adhered to in making distribution of Flight Use Report Forms (FS-6500-122 and OAS-23).

- (1) ORIGINAL AND ONE COPY - give to Helicopter Pilot. Contractors are responsible for submitting originals to the following paying offices:

FS-6500-122

USDA Boise National Forest
Attn: F&A
1249 S. Vinnell Way, Suite. 200
Boise, ID 83705

OAS-23

USDI Office of Aircraft Services
PO Box 15428
Boise, ID 83715-5428

- (2) ONE COPY - for the Helicopter Manager.

- (3) XEROX COPIES - for fire records maintained by Planning Section Chief Unit. When the Helicopter is released to ferry to another fire, and there will be a change in Helicopter Manager, the receiving fire will document the ferry time between fires. Coordination between fires shall be accomplished to prevent duplicate entries. Coordination can be accomplished by an appropriate note in the "Remarks" block of the Flight Use Report Form.

When the Helicopter is released to ferry home, agree to an estimated ferry time with the Pilot and document the agreement in the "Remarks" block of the Flight Use Report Form. The Pilot can then show actual times when the ferry flight is completed. The paying office will verify the reasonableness of the time claimed.

Your assistance in legibly completing the Flight Use Report Forms with all required information is requested. As a part of the information to be supplied, the person signing the form on behalf of the Government, is to show the following information in the "Remarks" blocks of each form.

1. Printed Name
2. Home Unit
3. Home Office

BEFORE USING ANY HELICOPTER, THE HELICOPTER MANAGER SHALL DETERMINE THAT THE PILOTS AND AT LEAST ONE MECHANIC HAVE BEEN INSPECTED AND APPROVED AS EVIDENCED BY THE APPROVAL CARDS ISSUED FOR THIS PURPOSE.

Enter the OAS Contract Number. This is available from either the vendor, or the contract itself.

Enter an Item Number if the aircraft is one of several awarded under the contract. The Item Number can be obtained from the contract or the aircraft data card

Enter the Name of the PIC.

Enter the name of additional pilots used.

Enter the name and address of the company

Enter the aircraft make and model

Enter the FAA Registration Number (N#).

Enter the names of additional authorized crewmembers used for which payment is authorized. Use the "other Charges/Credits" block to explain.

Enter the time and date the aircraft was hired. Record using a 24 hour time clock.

Enter the aircraft's designated base. This can be obtained from the contract. Note that payment for flight is made only from the designated base. In certain cases, alternative arrangements may be worked out with the Contracting Officer if the aircraft departs from or is ferried from a location other than the designated base.

1 COMPANY NAME & ADDRESS				2 CONTRACT/BOARD NO.		3 ITEM NO.		4 AIRCRAFT MAKE & MODEL		5 PILOT NAME (PIC)		SERV. AGENCY					
6 AIRCRAFT DESIGNATED BASE (CITY/ST)				7 FAA REGISTRATION NO.		8 PLOT NAME (2nd PIC)		9 AGENCY									
10 Hired (DATE & TIME)				11 RELEASED (DATE & TIME)				12 OTHER CREW MEMBER									
DATE MO/D/YR		LOCATION IDENTIFIER FROM TO		METER READING START STOP		ELAPSED TIME OR QUANTITY		PAY ITEM CODE PAY CARGO		PILOT INITIAL		BILLEE CODE NO. USE CODE		USER ORGANIZATION AND CHARGE CODE		STORED RECEIVED TAX CODE	
1	13	14		15	16	17	18										
10																	
11																	
12																	
13																	
14																	
15																	
25 OTHER CHARGES																	
OAS COPY (ORIGINAL)																	
I CERTIFY THAT THE ABOVE RECORD OF SERVICE IS CORRECT AND NO PAYMENT HAS BEEN RECEIVED.									AGENCY TELEPHONE NO. (COMM)			AGENCY:					
26 SIGNATURE OF CONTRACTOR/AGENT/EMPLOYEE:									27 SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE:								
NAME: DATE:									NAME: DATE:								
AGENCY ADDRESS:																	

AIRCRAFT USE REPORT

COMPANY NAME & ADDRESS 1													RECEIVED DATE										
													CONTRACT/EOANO. 2		ITEM NO. 3	AIRCRAFT MAKE & MODEL 4		PLOT NAME(1st) 5		SERV.	AGMT. NO.	AC CONTROL NO.	
													AIRCRAFT DESIGNATED BASE (CITY/ST) 6			FAA REGISTRATION NO. 7		PLOT NAME(2nd pt) 8		AGENCY ORDER NO. 9			
HRED (DATE & TIME) 10				RELEASED (DATE & TIME) 11				OTHER CREW MEMBER 12															
DATE MO/DY/YR	LOCATION IDENTIFIER FROM TO		METER READINGS START STOP		ELAPSED TIME OR QUANTITY	PAY ITEM CODE	PAYLOAD PAK CARGO		PLOT DITIAL	BILLE CODE NO.	USE CODE	USER ORGANIZATION AND CHARGE CODE	SIGNED RECEIVED	TAX CODE									
1 13	14		15	16	17	18	19		20	21	22	23	24										
2																							

FLIGHT TIME. Record elapsed flight time based upon the recorded start/stop time as recorded on the hobbs meter or approved recording device. Flights shall be individually recorded and the appropriate use code entered.

SPECIAL CHARGES. Special Charges such as hazardous materials permits, rental car charges, etc. are entered in whole dollars and are rounded to the nearest dollar. I.e.. A special charge of \$215.52 should be entered as 2.16 with a pay item code of SC.

SERVICE TRUCK MILES. Enter mileage traveled for official business only. This should be rounded up to the nearest mile. A charge for 125 miles should be recorded as 1.25 with a pay item code of SC.

DAILY AVAILABILITY. Enter 1.00 for each day of availability. To reflect unavailability, deduct 1/14 for each hour or portion thereof that service is unavailable. I.e. If the aircraft is unavailable for 2.2 hour during a day, availability should be recorded as .79 with pay item code of AV and .21 with pay item code of UA. Make sure to document the reason the aircraft was unavailable if unavailability occurs.

I CERTIFY THAT THE ABOVE RECORD OF SERVICE IS CORRECT AND NO PAYMENT HAS BEEN RECEIVED.		I CERTIFY THAT THE ABOVE SERVICES WERE RECEIVED.		AGENCY TELEPHONE NO. (COMM)	AGENCY:
26		27			AGENCY ADDRESS:
SIGNATURE OF CONTRACTOR/AGENT/NOT: NAME: DATE:		SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE: NAME: DATE:			

AIRCRAFT USE REPORT

RECEIVED DATE	
CONTROL NO.	

Enter the month, day, and year on each line.

Log flight time from an approved hour meter. Log non-flight time standby periods (I.e. Extended Availability) in 24 hour clock time.

LINE	DATE		LOCATION IDENTIFIER		METER READING		ELAPSED TIME OR QUANTITY	PAY ITEM CODE	PAYLOAD		PLOT INITIAL	FILE CODE NO.	USE CODE	USER ORGANIZATION AND CHARGE CODE	SIGNED RECEIVED	TAX CODE
	MO	DAY	FROM	TO	START	STOP			PAK	CARGO						
1	13				16	16	17	18	19					23	24	
2																
3																
4																
5																
6																

Note: These fields must not contain more than six characters. For location identifiers, enter one of the following:

- 3 Character FAA Identifier or location if the aircraft is located at a helibase that is not at an airport with an FAA identifier.

For flights that takeoff or land at locations without identifiers, enter the following:

- FIR for missions which depart from or to a fire, or for missions within the fire itself.
- INC for missions which depart from or to a non-fire incident
- PRJ for missions which depart from or to a project, or missions within a project itself.

For non-flight pay item codes and line item entries, enter either the FAA identifier, FIR, INC, or PRJ as applicable for the location where the line item charge is incurred. For standby, per diem, Guarantee, Availability, enter the 3 character in both to and from blocks.

For service truck miles, enter the location where mileage started and ended.

AIRCRAFT USE REPORT

												RECEIVED DATE			
1 COMPANY NAME & ADDRESS			2 CONTRACT/BOANO.			3 ITEM NO.	4 AIRCRAFT MAKE & MODEL			5 PLOT NAME(1PC)		SERV.	AGMT NO.	AC CONTROL NO.	
			6 AIRCRAFT DESIGNATED BASE (CITY/ST)			7 FAA REGISTRATION NO.			8 PLOT NAME(2d pc)		9 AGENCY ORDER NO.				
			10 HRED (DATE & TIME)			11 RELEASED (DATE & TIME)			12 OTHER CREWMEMBER						
DATE MO/DY/YR	LOCATION IDENTIFR FROM TO		METER READING START STOP		ELAPSED TIME OR QUANTITY	PAY ITEM CODE	PAYLOAD PAK CARGO		PILOT INITIAL	BILLET CODE NO.	USE CODE	USER ORGANIZATION AND CHARGE CODE		SIGNED RECEIVED	TAX CODE
1	13	14		15	16	17	18	19	20	21	22	23		24	
2															
3															
4															
5															
6															

AVAILABILITY. Enter the availability as described on a previous page.

EXTENDED STANDBY. Enter the hours of extended standby (1 hour equals 1.0). When the contract so states, enter separate line entries for each crewmember's extended standby indicating the amount of time in hours standby was provided - rounded up to the nearest hour (2.3 hours = 3.0 EP).

25		ORS COPY (ORIGINAL)	
I CERTIFY THAT THE ABOVE RECORD OF SERVICE IS CORRECT AND NO PAYMENT HAS BEEN RECEIVED		I CERTIFY THAT THE ABOVE SERVICES WERE RECEIVED.	
26		27	
SIGNATURE OF CONTRACTOR/AGENT/NOT: NAME: DATE:		SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE: NAME: DATE:	
		AGENCY TELEPHONE NO. (COMM)	
		AGENCY: AGENCY ADDRESS:	

AIRCRAFT USE REPORT

												RECEIVED DATE					
COMPANY NAME & ADDRESS 1				CONTRACT/BOANO. 2			ITEM NO. 3	AIRCRAFT MAKE & MODEL 4			PILOT NAME (PI) 5		SERV.	AGMT. NO.	AC CONTROL NO.		
				AIRCRAFT DESIGNATED BASE (CITY ST) 6				FAA REGISTRATION NO. 7				PILOT NAME (2nd PIC) 8		AGENCY ORDER NO. 9			
				HRED (DATE & TIME) 10				RELEASED (DATE & TIME) 11				OTHER CREWMEMBER 12					
	DATE MO/D/YR	LOCATION IDENTIFER FROM TO		METER READING START STOP		ELAPSED TIME OR QUANTITY	PAY ITEM CODE	PAYLOAD PAK CARGO		PLOT INITIAL	BILLEE CODE NO.	USE CODE	USER ORGANIZATION AND CHARGE CODE		SIGNED RECEIVED	TAX CODE	
1	13	14		15	16	17	18	19		20	21	22	23	24			
2																	
3																	
4																	

Enter the use code in the space provided. Use codes are entered for flight time only. Standard use codes are on the back cover of the OAS-23 Book. Enter the use code that specifically identifies or most closely identifies the mission. As previously stated, the Manger must track hour meter readings of the various missions the helicopter performs on a given day. Uses are then individually totaled and the start/stop and elapsed time are entered for each type of use.

The following is BLM specific direction on Use Codes. It should be used not only by BLM, but also by other managers completing OAS-23s for BLM incidents or projects.

- Do not enter any of the 3-series Use Codes (Local Fire Suppression). Always use the 2-series use codes for Interagency Fire Suppression.
- There is not a 2-series use code for Fire Reconnaissance; use IR.
- Use 3A, Helitack/initial attack for transport of the helicopter crew to the incident; use 3H for the return.
- Use 9P only for administrative point-to-point travel (must meet OMB A-126 cost comparison requirements).
- Do not use 4A, 5F, 5X, or 9X.
- See OAS-23 Book for use codes.

AIRCRAFT USE REPORT

										RECEIVED DATE					
COMPANY NAME & ADDRESS 1			CONTRACT/BOANO. 2			ITEM NO. 3	AIRCRAFT MAKE & MODEL 4		PLOT NAME(PE) 5		SERV.	AGMT. NO.	AC CONTROL NO.		
			AIRCRAFT DESIGNATED BASE (CITY ST) 6			FAA REGISTRATION NO. 7			PLOT NAME(2nd pt) 8		AGENCY ORDER NO. 9				
			HRED (DATE & TIME) 10			RELEASED (DATE & TIME) 11			OTHER CREW MEMBER 12						
	DATE MO/DYR	LOCATION IDENTIFR FROM TO		METER READING START STOP		ELAPSED TIME OR QUANTITY	PAY ITEM CODE	PAYLOAD PAK CARGO	PLOT INITIAL	BILLE CODE NO.	USE CODE	USER ORGANIZATION AND CHARGE CODE		SIGNED RECEIVED	TAX CODE
1	13	14		15	16	17	18	19	20	21	22	23		24	
2															

An Agency Order Number for BLM flights is the Document Control Number to process billings by OAS through the Denver Service Center. A Document Control Number consists of a one-digit state identifier, a 3 digit Office Code, and a 2-digit entry identifying the Document type and fiscal year, and a 4-digit month number.

1. STATE. 1-digit alpha State Code as follows:

Alaska: L Idaho: I Oregon: H Washington Offices: P
 Arizona: A Montana: E Utah: J
 California: B Nevada: F Wyoming: K
 Colorado: C New Mexico: G NIFC: R

2. Office. 3-digit numeric code of the Office (Organization) submitting the OAS-23. This will usually be a District or State Office, or a division of NIFC or the Washington Office.

3. Document Type. 1-digit alpha. Always enter "8" for Aircraft Use.

4. Fiscal Year. 1-digit numeric. Enter last digit of the fiscal year in which the flight was taken.

5. Sequential Month Number. 4-digit numeric. Enter the month in which the OAS-23 will be mailed to OAS. Numeric month codes begin with 0001 for October and proceed through 0012 for September. Month 0013 is assigned to all OAS-23's sent to OAS after Sept. 30 for flights taken during the fiscal year ending Sept. 30 but are not mailed until after the fiscal year.

All zeros in the month entry must be entered. All fields should be separated by "-" (dash).

PAYLOAD. Passengers (PAX) and internal cargo may be entered on the same line, however, Pax and external cargo loads are not to be entered on the same line.

PAX. Enter the number of passengers for the Pay Item and Use Code. Information is available from the load calculations and manifests. Internal cargo that is incidental to the transport of passengers is entered under cargo and entered in pounds.

CARGO. Enter pounds of cargo delivered with the appropriate use code. Enter gallons of water, foam, or retardant delivered on separate line entries with the appropriate use code. Do not enter both pounds and gallons for the same item.

	DATE		LOCATION IDENTIFIER		METER READING		ELAPSED TIME OR QUANTITY	PAY ITEM CODE	PAYLOAD		PLOT INITIAL	BILLET CODE NO.	USE CODE	USER ORGANIZATION AND CHARGE CODE	SIGNED RECEIVED	TAX CODE	
	MO/DY/YR		FROM	TO	START	STOP			PAS	CARGO							
1	13		14		15	16	17	18	19		20	21					
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

After Helicopter Manager makes line item entries, the pilot reviews and initials each line

When charges are incurred and are payable under the terms of the contract, a separate entry is required of each applicable Pay Item using the codes listed on the inside cover of the OAS-23 Book.

OTHER CHARGES/CREDITS & INFORMATION:

25

OAS COPY (ORIGINAL)

I CERTIFY THAT THE ABOVE RECORD OF SERVICE IS CORRECT AND NO PAYMENT HAS BEEN RECEIVED.	I CERTIFY THAT THE ABOVE SERVICES WERE RECEIVED.	AGENCY TELEPHONE NO. (COMM)	AGENCY:
26	27		AGENCY ADDRESS:
SIGNATURE OF CONTRACTOR/AGENT/Pilot:	SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE:		
NAME: DATE:	NAME: DATE:		

AIRCRAFT USE REPORT

RECEIVED DATE	
---------------	--

COMPANY NAME & ADDRESS 1			CONTRACT/BOAGNO. 2		ITEM NO. 3	AIRCRAFT MAKE & MODEL 4		<div style="border: 1px solid black; padding: 5px;"> AGENCY SPECIFIC ENTRY. Enter the specific Charge Code that the line item will be billed to. </div>							
			AIRCRAFT DESIGNATED BASE (CITY/ST) 6		FAA REGISTRATION NO. 7										
			HIRED (DATE & TIME) 10		RELEASED (DATE & TIME) 11										
DATE MO/D/YR	LOCATION IDENTIF. FROM TO		METER READING START STOP		ELAPSED TIME OR QUANTITY	PAY ITEM CODE	PAYLOAD PAK CARGO		PLOT DITIAL	BILLEE CODE NO.	USE CODE	USER ORGANIZATION AND CHARGE CODE		SIGNED RECEIVED	TAX CODE
1	13	14	15	16	17	18	19		20	21	22	23		24	
2															
3															
4															

GENERAL. OAS assigns a Billee Code to a unit as a mechanism for billing the charges for an OAS-23 line entry. The unit whose billee code is entered will receive a detail of those charges which will be paid through the IPAC System for all federal agencies (OAS has usually already paid the vendor).

Different Billee Codes can be assigned for different line items.

FIRE BILLINGS. The entry made under “user organization and charge codes” must be the charge code of an agency whose billee code was entered.

YOU CANNOT ENTER A BLM BILLEE CODE, AND USE A FOREST SERVICE “P” NUMBER OR VICA VERSA.

If a BLM contract aircraft is used on a USDA-FS fire, a BLM Billee Code and charge code shall be entered.

If a USDA-FS Billee Code and charge code were entered, then OAS would bill the USDA-FS, which is contrary to the master agreement.

AIRCRAFT USE REPORT

RECEIVED DATE

COMPANY NAME & ADDRESS 1		CONTRACT/EO ANO. 2	ITEM NO. 3	ARCR
		ARCR/AFID DESIGNATED BASE (CIWSI) 6	FAA	
HRED (DATE & TIME) 10		RELEASED 11		
LAPSED TIME OR HOURS 17	PAY ITEM CODE 18	PAYLOAD PAK 19	FLY INITIAL 20	CODE NO. 21
		CARGO 22		USE CODE 23
				USER ORGANIZATION AND CHARGE CODE 24
				SIGNED RECEIVED 24
				TAX CODE

Manager signs or initials in the "Signed Received" block after verifying all the information is correct. To meet OMB A-123 internal control requirements, the individual initialing this block cannot be the same person who signs the bottom right block.

In the "Other Charges/Credits" block, managers should document any additional charges, the reason for periods of unavailability, etc. However, Your Daily Diary should provide your primary means of documentation.

Local aviation manager or other approved government representative reviews line entries, signs, and dates each OAS-23. The using unit should, if possible date stamp each OAS-23 on the date it is received. To ensure prompt payment, the white original OAS-23 must be forwarded to OAS no more than 2 days after the use period ends. All OAS-23's must be processed through the using unit's aviation manager prior to being sent to OAS.. They are Not to be sent directly to OAS. CWN managers are responsible for ensuring that the OAS-23's are delivered to the local unit aviation managers or dispatch office. During extended use periods, the OAS-23's may be signed and mailed every two weeks, usually on the 1st and the 16th of each month.

The Contractor's representative, usually the pilot, shall complete and sign these blocks to certify the record of services is accurate and complete.

OAS COPY (ORIGINAL)

I CERTIFY THAT THE ABOVE RECORD OF SERVICE IS CORRECT AND NO PAYMENT HAS BEEN RECEIVED 26	I CERTIFY THAT THE ABOVE SERVICES WERE RECEIVED. 27	AGENCY TELEPHONE NO. (COMM)	AGENCY:
SIGNATURE OF CONTRACTOR/AGENT/ EGT. NAME: DATE:	SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE. NAME: DATE:	AGENCY ADDRESS:	

1 INVOICE NUMBER 1234567	2 DATE OF FLIGHT 1 / 1	3 CONTRACT NUMBER - ITEM ID
4 USER UNIT	5 USER CODE	6 PROJECT, FIRE, FLIGHT, OR RESOURCE ORDER NAME OR NUMBER
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862	863	864
865	866	867
868	869	870
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970	971	972
973	974	975
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1000	1001	1002

22. RATE: Enter the rate as appropriate. For extended standby, or like situations, when two or more crew members are paid, increase the rate to reflect the additional crewmembers. Example: 3 crewmembers are authorized ES for 1 hour, rate per crewmember is \$32 /HR., enter \$96 in the rate block.

BLOCK 11, MISSION CODE: Enter the two-digit code that best describes the use of the aircraft (See coding instructions.) Example: For an air tanker on standby, enter 10 in mission code block, and SB in pay code block.

AVIATION MANAGEMENT ACTIVITIES

- 01 Aircraft, Pilot, Unit Inspections
- 02 Pilot Training
- 03 Aircraft Maintenance
- 04 Reserved

FIRE SUPPRESSION ACTIVITIES

- 05 Personnel Transport, Fire Suppression
- 06 Reconnaissance (flights for gathering intelligence)
- 07 Detection (flights for detecting wildfire)
- 08 Air Attack Operations
- 09 Leadplane Operations
- 10 Retardant/Water/Foam Delivery
- 11 Smokejumper Operations
- 12 Helitack Operations
- 13 Rappeller Operations
- 14 Equipment/Supply Transport Operations
- 15 Infrared Imagery Operations
- 16 Aerial Ignition Operations
- 17 Other, Fire Suppression

OTHER ACTIVITIES

- 18 Personnel Transport, Administrative
- 19 Survey / Observation
- 20 Ferry - Use for time spent repositioning aircraft for mission readiness
- 21 Wildlife / Animal Count
- 22 Search and Rescue
- 23 Law Enforcement / Investigation
- 24 Research
- 25 Air Quality Monitoring
- 26 Fire Management
- 27 Prescribed Burning (including delivery of retardant / water / foam)
- 28 Spray projects
- 29 Cargo Transport, other than FIRE
- 30 Aerial Photography
- 31 Infrared Imagery, normal activities
- 32 Aerial Ignition, normal activities
- 33 Accident Investigation
- 34 Other, normal activities
- 35 Reserved
- 36 Reserved
- 37 Reserved
- 38 Reserved
- 39 Training - Other than Pilot
- 40 Seed and Fertilization
- 41 Multivac

1. INVOICE NUMBER
1234567

2. USER UNIT
3. USER CODE

4. PROJECT, FARE, FLIGHT, OR RESOURCE ORDER NUMBER
5. FROM
6. TO

7. FAA IDENTIFIER
8. MISSION CODE
9. PAY CODE

10. PILOT NAME(S)
11. PILOT NAME(S)

12. PAY CODE: Enter the two-digit code that best describes the purpose of the charges, i.e. NA (nonavailability) with a mission code (block 11) of 12 for helitack operations.

BLOCK 12 - PAY CODE

AV	Availability	JC	Job Contract
CH	Other Charges	NA	Non-Availability
CN	Cancel Dispatch	NF	Other Non-Flight
CR	Other Credit	ON	Overnight
DO	Mandatory Day Off	SB	Standby
ES	Extended Standby	SP	Special Passengers
FT	Flight Time	ST	Service Truck
GU	Guarantee	TX	Taxes

13. PILOT NAME(S): Enter the last name, first name of the PIC, Co-Pilot/IP if any.

14. PASSENGERS AND OTHER CREW MEMBERS: Enter the number of passengers, and other nonpilot crew members, exclusive of pilot(s) listed in block 13.

15. CARGO TYPE: Enter type of cargo transported:
P = Paracargo, S = Slingload (less than 50 ft. line), L = Longline (more than 50 ft. line), C = All Other.

16. CARGO LBS.: Enter the number of pounds of cargo delivered.

17. RETARDANT: Enter the appropriate letter indicating the type used: F = Foam, W = Water, L = Liquid Based, S = Solid Based.

18. PASSENGERS & OTHER CREW MEMBERS

NO.	LAST NAME	FIRST NAME	INITIALS	POSITION	NO. OF PEOPLE
1					
2					
3					
4					
5					
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13					
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33					

19. CARGO TYPE P.C. OR L.C. OR S.C.

20. CARGO LBS.

21. RETARDANT F.W.S. OR L.

22. PAY CODE

23. MISSION CODE

24. LOCATION

25. NO. OF PEOPLE

26. SERVICE TRUCK CHARGES

27. OTHER CHARGES

28. OTHER CREDITS

29. EXCISE TAX

30. SUBTOTAL

31. TOTAL OF ALL CHARGES

32. NAME OF GOVERNMENT OFFICIAL (PLEASE PRINT)

33. PHONE NUMBER

34. I CERTIFY THAT THE SERVICES LISTED ABOVE HAVE BEEN RECEIVED. SIGNATURE AND TITLE OF FOREST SERVICE OFFICIAL

35. I CERTIFY THAT THE SERVICES LISTED ABOVE HAVE BEEN RECEIVED. SIGNATURE AND TITLE OF VENDOR AGENT

USDA - FOREST SERVICE - FLIGHT REPORT - FS 6500-123 (06/99)

PREVIOUS EDITION OF THIS FORM IS OBSOLETE

9. PROJECT, FIRE, FLIGHT, OR RESOURCE ORDER NAME OR NUMBER: Enter a project, fire, flight, or resource order number or name that corresponds to the user on that leg.

6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
USER UNIT	USER CODE	PROJECT FIRE FLIGHT OR RESOURCE ORDER NAME OR NUMBER	FAA IDENTIFIER	FROM	TO	MISSION	EGGS	LEG NUMBER	LEGS	DATE	TIME											

10. FAA IDENTIFIER: Enter the FAA airport identifier; examples: Boise = BOI, Roosevelt Helibase = Z58. Use FIR for landing on fires, IILB for unlisted helibases, HSP for non-fire unlisted helispots, and BCS for unlisted airstrips. (4 characters are allowed if needed.)

8. USER CODE: Enter the two-digit user code from the coding instructions that identifies the administrative unit/function using the aircraft.

- 01 Aviation and Fire Management
- 02 Administrative Management
- 03 Administrative Services
- 04 Civil Rights
- 05 Computer Services
- 06 Engineering
- 07 Experiment Stations
- 08 Fiscal and Accounting Management
- 09 Forest Pest Management
- 10 Human Resource Management
- 11 Lands
- 12 Land Management Planning
- 13 Law Enforcement
- 14 Mineral and Geology
- 15 Office of General Council
- 16 Office of Information
- 17 Personnel Management
- 18 Program Planning and Budget
- 19 Range Management
- 20 Recreation Management
- 21 Regional Forester / Forest Supervisor
- 22 State and Private Forestry
- 23 Timber Management
- 24 Watershed and Air Management
- 25 Wildlife and Fisheries
- 26 Other Agency or Cooperator
- 27 Other (explain in remarks block)

21. ELAPSED TIME: Enter the elapsed time in hours and hundredths for any "time" entry, regardless of the meter type or activity. If CLOCK time, see conversion table in coding instructions. If HOUR METER, enter whole hours and two digits on right side of decimal (example: 2.3 hours would be entered as 2.30 hours). When, for payment purposes, fractions of an hour are rounded to the next full hour, enter the whole hour, not the fraction.

Block 21 - ELAPSED TIME.
Minutes to hundredth conversion

(Formula used to convert is: "Minutes" divided by 60)
MINUTES = 100th

1=.02	11=.18	21=.36	31=.62	41=.88	51=.86
2=.03	12=.20	22=.37	32=.63	42=.70	52=.87
3=.05	13=.22	23=.38	33=.66	43=.72	53=.88
4=.07	14=.23	24=.40	34=.67	44=.73	54=.90
5=.08	15=.25	25=.42	35=.68	45=.75	55=.92
6=.10	16=.27	26=.43	36=.69	46=.77	56=.93
7=.12	17=.28	27=.45	37=.71	47=.78	57=.95
8=.13	18=.30	28=.47	38=.72	48=.80	58=.97
9=.15	19=.32	29=.48	39=.74	49=.82	59=.98
10=.17	20=.33	30=.50	40=.81	50=.83	60=1.00

1 INVOICE NUMBER
1234567

2 DATE OF FLIGHT
/ /

3 CONTRACT NUMBER - ITEM NO.
/

4 AC REGISTRATION #

5 VENDOR NAME

BLOCK 7-B, USER UNIT CODE: Enter the FS unit code, or non-FS agency code of the unit or agency USING THE AIRCRAFT.
(If Non-Forest Service Unit, enter organization code from attached list)

LEG NUMBER	USER UNIT CODE	STATE CODES	AC REGISTRATION #	VENDOR NAME	BLM
1		Alabama			BLM
2		Alaska			BLM-MAK
3		Arizona			BLM-AZ
4		Arkansas			BLM-MCA
5		California			BLM-MCO
6		Colorado			BLM-ME
7		Connecticut			BLM-MID
8		Delaware			BLM-MMT
9		Dist. of Col.			BLM-MV
10		Florida			BLM-MHM
11		Georgia			BLM-MOR
12		Hawaii			BLM-MUT
13		Idaho			BLM-MWY
14		Illinois			
15		Indiana			
16		Iowa			
17		Kansas			
18		Kentucky			
19		Louisiana			
20		Maine			
21		Maryland			
22		Massachusetts			
23		Michigan			
24		Minnesota			
25		Mississippi			
26		Missouri			
27		Montana			
28		Nebraska			
29		Nevada			
30		New Hampshire			
31		New Jersey			
32		New Mexico			
33		New York			
34		N. Carolina			
35		N. Dakota			
36		Ohio			
37		Oklahoma			
38		Oregon			
39		Pennsylvania			
40		Rhode Island			
41		S. Carolina			
42		S. Dakota			
43		Tennessee			
44		Texas			
45		Utah			
46		Vermont			
47		Virginia			
48		Washington			
49		West Virginia			
50		Wisconsin			
51		Wyoming			
52		Alabama Forestry Commission			
53		Alaska Division of Forestry			
54		AZ State Land Development			
55		Florida Div. of Forestry			
56		Idaho Department of Lands			
57		Minnesota Forestry			
58		Montana Forestry			
59		New Mexico Forestry			
60		New York Forestry			
61		N. Carolina Forestry			
62		N. Dakota Forestry			
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261		Utah Forestry			
262		Vermont Forestry			
263		Virginia Forestry			
264		Washington Forestry			
265		West Virginia Forestry			
266		Wisconsin Forestry			

USDA—Forest Service <h1 style="margin: 0;">TRUCK</h1> <h2 style="margin: 0;">HELICOPTER DATA RECORD</h2> <p style="margin: 0;">(Reference FS# 5709.12)</p>		1. Contract/Rental Agreement No. <hr/> 2. Item No. <hr/> 3. Designated Base <hr/> 4. Region/Area <hr/>
SECTION I — Operator & Helicopter Information (Fill in blanks)		
1. Operator <hr/>	2. Address (Street, City, State & ZIP Code) <hr/>	3. Phone No. () <hr/>
SECTION VI — Service Truck (X appropriate boxes)		
1. Capacity _____ Gallons 2. Type Truck _____ 3. License No. _____ 4. *Condition _____ 5. *Fire Extinguishers _____ 6. *Fuel Meters _____ 7. *Differential Pressure Gauges _____ 8. *Placarded—49 CFR 172 _____ 9. *Marked w/Type Fuel _____	10. *Sump and Drain _____ 11. *Nozzle Screen _____ 12. *Fuel Hoses _____ 13. *Ground & Bonding Cables _____ 14. *Fuel Filtering System _____ 15. *Date Filter Changed _____ 16. *Spare Filters _____ 17. *No Smoking Signs _____	Satisfactory Yes _____ No _____
18. Approved By (Signature) <hr/>	19. Title <hr/>	20. Region/Area <hr/> 21. Date <hr/>

FLIGHT FOLLOWING PROCEDURES

When the helicopter and module are ready to depart for the incident, the pilot must file a flight plan or do flight following while in transit.

At each fuel stop, the module manager, or pilot if the module manager is not aboard, should call in to NICC on the toll free phone number 1-800-994-6312 and give the aircraft desk a situation report.

Ground support shall do the same every four hours.

INSPECTION AND APPROVAL INFORMATION

In order to expedite the approvals and carding of aircraft and pilots for Forest Service and Department of Interior work, there are a few things that need to be considered before the USFS/OAS inspectors arrive at your site.

- (1) Please have your pilots complete the Pilot Qualifications and Approval Record Form, and have their log books and pilot records available.
- (2) Please allow ample time in your pilot's schedule for the testing and safety briefing portion of our inspection. . .up to 1.0 hours.
- (3) Please allow ample time in your schedule for the flight check. . .up to 1.5 hours.
- (4) Please have any appropriate equipment installed on the aircraft prior to inspection and flight check, i.e., **dual controls**, radios, water buckets, etc. A long-line of at least 50' and a suitable weight should be available.
- (5) Please have maintenance records up to date and available for the aircraft avionics and maintenance inspectors.
- (6) Please have a copy of your contract with each aircraft offered.
- (7) Please have maintenance personnel available to open and close cowlings and access panels.
- (8) The fuel servicing vehicle will be inspected at this time.

DOCUMENTS REQUIRED FOR PILOT CERTIFICATION

- [] 1. Complete Pilot Qualifications and Approval Record.
- [] 2. Copy of pilot's licenses.
- [] 3. Copy of pilot's medical certificate.
- [] 4. Copy of pilot's FAR 135 Airman Competency/Proficiency Check (FAA from 8410-3). For limited use helicopters, an equipment check endorsement by the chief pilot.
- [] 5. Copy of FAR 133 competency endorsement.
- [] 6. Signed Forest Service/OAS Pilot Safety Briefing.

**If you have questions regarding inspections,
please call (208) 387-5621**

HELICOPTER & SERVICE TRUCK PRE-USE CHECKLIST

GENERAL		
DATE:	AIRCRAFT MAKE/MODEL:	FAA REGISTRATION #:
CONTRACTOR:		
PILOT(S) NAME(S):		
CARD EXPIRATION DATE(S):		
PILOT(S) CARGED FOR INTENDED MISSION(S)?: () YES () NO		
A/C CARD EXPIRATION DATE:		
A/C CARGED FOR INTENDED MISSION(S)?:		
DEPT. BASE:	DEPARTURE HC885 READING:	ARRIVAL HC885 READING:

LOGBOOK REVIEW		
90/100-HR. PROGRESSIVE, OR OTHER INSPECTION PROGRAM UP-TO-DATE?	() YES	() NO
ENTRIES INDICATING DAMAGE TO AIRCRAFT?	() YES	() NO
POWER CHECK COMPLETED/RESULTS SATISFACTORY?	() YES	() NO
COMMENTS ON LOGBOOK:		

CONDITION OF HELICOPTER					
ITEM	OK	SCRATCHES	DENTS	TEARS	LEAKS
Skin and Exterior					
Windows					
Doors					
Upholstery					
Cargo Compartment					
Skids/Wheels					
Fixed Tank					
Bucket					
COMMENTS:					

REQUIRED HELICOPTER EQUIPMENT INSTALLED AND OPERATIVE (CONSULT CONTRACT)						
ITEM	YES	NO	ITEM	YES	NO	
Seat Belts and Harnesses			Strobe Light(s)			
Hi-Visibility Paint On Main Rotor Blades			Survival Kit			
9600-Channel Radio			First Aid Kit			
VHF-AM 720-Channel			Fire Extinguisher(s)			
Packset Adapter			Cargo Hook			
Loran/GPS			Convex Mirror			
High Skid Gear			Bucket			
Nine-Pin Plug			Other:			
COMMENTS:						

REQUIRED SERVICE TRUCK EQUIPMENT INSTALLED AND OPERATIVE (CONSULT CONTRACT)						
ITEM	YES	NO	ITEM	YES	NO	
Spare Set Of Filters			Filter Change Date Placarded			
Fire Extinguishers/ Current			Ground Cables			
Hazmat Marking and Placards			Fuel Quality Control Log			
Inspection Sticker			Absorbent Materials For Spills			
COMMENTS:						

SIGNATURE OF INSPECTING REPRESENTATIVE	PRINT NAME	DATE
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WHITE: CO YELLOW: A/C INSPECTOR BLUE: CONTRACTOR GREEN: ORIGINATOR HCM-2
(May, 1992)

Page 9a
 HELICOPTER SERVICES
 HOURLY FLIGHT RATES, FUEL CONSUMPTION, AND WEIGHT REDUCTION CHART
 APRIL 15, 2003 FUEL SURVEY
 EFFECTIVE APRIL 16, 2003
 (Applicable for Initial Contracts Awarded in 2002 – CWN/Exclusive Use)

Revision 4
 04/24/2003

COMPANY	AIRCRAFT TYPE	April 15, 2003		LOAD CALCULATION Weight Reduction (lbs)
		FUEL CONSUMPTION (gal/hr)	HOURLY FLIGHT RATE	
AEROSPATIALE	SA-315B	58	\$1,076.00	180
	SA-316B	58	\$1,076.00	170
	SA-318C	56	\$1,019.00	80
	SA-319B	55	\$1,032.00	NOT ESTABLISHED
	AS-330J	179	\$2,607.00	N/A
	SA-332L-1	160	\$2,834.00	N/A
	SA-341G	56	\$1,001.00	170
	AS-350B	45	\$664.00	130
	AS-350B-1	46	\$665.00	160
	AS-350B-2	48	\$672.00	160
	AS-350B-3	50	\$706.00	175
	AS-350D	38	\$667.00	130
	AS-355F-1	58	\$830.00	140
	AS-355F-2	58	\$830.00	140
	AS-365N-1	87	\$1,372.00	275
	EC-135	64	\$866.00	220
	BELL:	47/SOLOY	23	\$400.00
204B (UH1 Series)		88	\$982.00	200
205A-1		89	\$1,024.00	260
UH-1B		88	\$982.00	N/A
UH-1F		85	\$996.00	N/A
TH-1L		88	\$1,004.00	N/A
UH-1H		89	\$1,007.00	N/A
206B-II		25	\$493.00	100
206B-III		27	\$500.00	130
206L-1		32	\$604.00	150
206L-3		38	\$624.00	180
206L-4		38	\$621.00	180
212		100	\$1,163.00	390
214B		160	\$1,595.00	380
214ST		133	\$2,044.00	NOT ESTABLISHED
222A		70	\$1,229.00	NOT ESTABLISHED
222B		83	\$1,275.00	NOT ESTABLISHED
222UT		83	\$1,250.00	NOT ESTABLISHED
407		45	\$687.00	155
412		110	\$1,330.00	OGE 390
412HP	110	\$1,330.00	OGE 390	
BOEING:	BV-107	180	\$2,606.00	N/A
	BV-234	405	\$4,650.00	N/A
HILLER:	*SL-3/4	21	\$405.00	90
	H-1100B	22	\$527.00	130
	UH-12/SOLO	23	\$457.00	100
KAMEN:	H43-F	85	\$1,077.00	N/A
	K-MAX	85	\$1,054.00	N/A
MBB:	BO105CBS	55	\$806.00	180
	BK-117	77	\$1,139.00	160
McDONNELL-DOUGLAS:	500C	23	\$525.00	110
	500D/E	28	\$529.00	120
	520N	32	\$553.00	100
	530F	34	\$599.00	120
	600N	41	\$657.00	155
	900/902	69	\$884.00	210
SIKORSKY:	S-55T	47	\$746.00	170
	S-58D/E	83	\$1,139.00	N/A
	S-58T/PT6T-3	115	\$1,425.00	OGE 000
	S-58T/PT6T-6	115	\$1,425.00	OGE 000
	CH 54/S 64	525	\$4,810.00	N/A
	S-61N	170	\$2,479.00	N/A
	S-62A	70	\$857.00	300
	S-70	160	\$2,246.00	N/A
AVERAGE GALLON PRICE: JET FUEL			\$2.86	

ADDITIONAL INFORMATION FOR TYPE I & II CWN HELICOPTERS

ADDITIONAL CONTRACT RATES -

1. Extended Standby Rate - per authorized crew member: **\$38.00/hr.**
(G.5, page 61)
2. Additional Personnel (G.6, Page 61): Personnel ordered by the Government in excess of the indicated compliment will be considered "additional personnel," and will be paid the rate of \$400.00 per day. **\$400.00/day**
3. Airport Use Costs (G.9, page 62): **Actual Costs**
4. Payment for Retardant Concentrate (G.13, Page 63): **Actual Costs**
5. Payment for Fuel Servicing Vehicle Mileage (G11, Page 62):
\$2.40 per mile - where the carrying capacity of aircraft fuel is 1,500 gallons or more.
\$1.90 per mile - where the carrying capacity of aircraft fuel is at least 750 gallons, but less than 1,500 gallons.
\$1.35 per mile - where the carrying capacity of aircraft fuel is at least 350 gallons, but less than 750 gallons.
\$.90 per mile - where the carrying capacity of aircraft fuel is less than 350 gallons.
6. Overnight Allowance not applicable.

COMPLEMENT OF PERSONNEL -

- TYPE I:** Complement of personnel to be provided with each Type I Helicopter is specified in the following helicopter information charts.
- TYPE II:** Maximum complement of personnel to be provided with each Type II Helicopter is three, unless additional personnel are ordered by the Government.

**MINIMUM PERFORMANCE REQUIREMENTS
(TYPE II - LIMITED AND STANDARD) -**

Turbine or piston engine.

Seating capacity (standard only) - a minimum of 9 passengers (turbine engine only when carrying passengers).

Capability of hovering-out-of-ground effect (HOGE) at 5,000 feet MSL and 30 c with a minimum payload of 1,600 pounds as computed on form FS-5700-17, Helicopter Load Calculation (see Section J), using actual 200 pounds for each required crew member and 1.5 hours of fuel on board.

**MINIMUM PERFORMANCE REQUIREMENTS
(TYPE I - LIMITED AND STANDARD) -**

Turbine engine.

Seating capacity **(if applicable)** –for a minimum of 16 passengers

Capability of hovering-out-of-ground effect (HOGE) at 5,000 feet MSL and 30 c with a minimum payload of 4500 pounds as computed on form FS-5700-17, Helicopter Load Calculation (see Section J), using actual 200 pounds for each required crew member and 1.5 hours of fuel

SECTION C - DESCRIPTION/SPECIFICATION WORK STATEMENT

C.1 SCOPE OF CONTRACT

(1) The intent of this solicitation and any resultant contract is to obtain services of Standard and Limited use Type I Helicopters, (see Section J, DEFINITIONS OF CONTRACT TERMS) fully operated by qualified personnel and equipped to meet specifications for use in administration and protection of Public Lands. See note below.

(2) The Helicopter furnished will be used for fire support, project, law enforcement, and administrative flights. The Contractor must agree in writing to law enforcement flights (see Section J, DEFINITIONS OF CONTRACT TERMS).

(3) The Government has Interagency and cooperative agreements with State Agencies and private landholders and may dispatch aircraft under this contract for such cooperative use.

(4) When authorized by the Contractor (see SCHEDULE OF ITEMS), work under the contract may be performed utilizing a qualified Government Pilot.

(5) Performance of services may involve work and/or residence on Federal/State/Private property. Contractor employees are expected to follow the rules of conduct established or implemented by the manager of such work location that apply to all (both Government or non-Government) personnel. The Contractor may be required to replace employees who are found to be in noncompliance with Government facility rules of conduct.

C.2 CERTIFICATION AND OPERATIONS

C.3 GENERAL (STANDARD AND LIMITED USE)

(1) Contractors must be currently certificated under Federal Aviation Regulations (FAR) Part 133 (External Load Operations) and Part 137 (Agricultural Aircraft Operations).

NOTE: FAR 137 certification is not required when the equipment offered is being used for 133 (external load operations) project work only.

Note: This solicitation is for Type II Standard and Limited Use Helicopters. Ignore all references to Type I Helicopters

(2) Helicopters may be required to carry hazardous materials. Such transportation shall be in accordance with exemption DOT-E-9198 and the Department of Interior or USDA-FS Aviation Transport of Hazardous Materials Guide. A copy of the exemption and handbook must be aboard each aircraft operating under the provisions of this exemption. It is the Contractor's responsibility to ensure that each employee that may perform a function subject to this exemption receives training on the requirements and conditions of this exemption. Documentation of this training shall be retained by the company in the employee's records and made available to the Government inspector as required.

(3) To provide adequate fuel reserve all operations should comply with FAR 91.151 for VFR and FAR 91.161 for IFR operations.

(4) Flight Plans. Pilots shall file and operate on a FAA, ICAO, or Agency flight plan. Contractors flight plans are not acceptable. Flight plans shall be filed prior to takeoff when possible.

(5) Flight Following. Pilots are responsible for flight following with the FAA, ICAO, and/or in accordance with the Agency procedures.

(6) Military or other low visibility paint schemes are unacceptable. Other variations may be approved by the Contracting Officer.

C.4 HELICOPTERS Awarded As Standard Use

(1) Contractors shall hold a current FAA Aircarrier Certificate. Any Helicopter offered shall be listed by make, model, and series on the operators 135 Certificate. Aircraft operated under 14 CFR Part 135 shall be listed as required by 14 CFR 135.63 unless authorized by the Contracting Officer. The Contractor may be required to furnish a copy of the company Part 135 operating specifications manual to the Contracting Officer prior to the start of work.

(2) Helicopters shall conform to their approved type design, be maintained and operated in accordance with the requirements of the FAR (14 CFR 135.1 Subparagraph (b) notwithstanding) and the aviation regulations of the States in which the Helicopter may operate except those requirements specifically waived by the Contracting Officer.

(3) 14 CFR 135.99 notwithstanding, flights with ten (10) or more passengers may be made with a single pilot provided a qualified Helicopter Manager or Foreman is on board during the flight and operation specifications are being met. (Does not apply to USDI when aircraft are utilized for project use).

(4) Helicopters must be certificated in normal or transport category.

(5) Helicopters shall carry their fully rated capacity of passengers and cargo allowable as determined by the Standard Interagency Load Calculation method when ordered to do so by the Contracting Officer irrespective of the minimum requirements stated in the SCHEDULE OF ITEMS. Load calculations shall be performed on Form USDA-FS 5700-17 or Form DOI-67.

(6) A Government Helicopter Manager may ride in a Type I standard category Helicopter during point-to-point flights at altitudes above 500 ft. AGL subject to the following conditions:

(A) FAA approved passenger or crew seat with an FAA approved restraint system. This seat must be in conformity with the Helicopter's type certificate.

(B) The use of the observer position (jump seat) is not approved.

(C) Authorization to ride in a Standard Category Type I Helicopter will be noted on the Aircraft Approval Form (A/C Data Card).

Note: The Government may elect not to utilize individual standard category aircraft for passenger transport. Such aircraft will be carded for cargo and external loads only. Offerors are encouraged to submit Daily Availability rates that when divided by 14 result in whole dollars not cents. Rates not divisible by 14 will be rounded up to the next whole number by the Government for the purpose of paying availability or deducting unavailability.

C.5 HELICOPTERS Awarded As Limited Use

- (1) Helicopters must be certificated in normal, transport, or restricted category.
- (2) Helicopter managers may not ride in any restricted category Helicopter.
- (3) Helicopters shall have been issued a Standard or Restricted Airworthiness Certificate.
- (4) Helicopters which are configured from aircraft types which have FAA Type Certificates obtained by the aircraft manufacturer must incorporate the manufacturer's designated changes to bring the aircraft into conformity with their type design, excluding passenger configuration requirements. All applicable Airworthiness Directives and manufacturer service bulletins must be accomplished.
- (5) Helicopters which are configured from former military aircraft, which have FAA Type Certificates based upon military operation in lieu of a manufacturer's type certificate, must have all applicable Time Compliance Technical Orders (TCTO's) or Navy/Army Service Bulletins accomplished. This includes any directives which refer to later models of the same type which were issued after the earlier models had left the military inventory. If FAA approvals establish more restrictive limits, they will prevail
- (6) Helicopters shall carry their fully rated capacity of cargo or suppressant/retardant as determined by use of the approved weight and balance and performance data (down load not required). Only external cargo loads may be carried.
- (7) All internal passenger seats shall be removed during performance under this contract except seats for Contractor's personnel on ferry flights.
- (8) A placard, stating "NO PASSENGERS" with letters at least 2 inches in height shall be displayed on the cabin door(s).

C.6 GOVERNMENT FURNISHED PROPERTY

The Government will deliver to the Contractor the following Government-furnished property at the time of call-up. (See Section I, GOVERNMENT FURNISHED PROPERTY). The Contractor will be required to sign a property receipt document when receiving Government furnished property.

(1) Personal fire shelter for Contractor field personnel and instruction on deployment.

(2) Department of Interior or USDA-FS Aviation Transport of Hazardous Materials Guide.

(3) The Government may provide an Auxiliary VHF-FM Portable Radio (AUX-FM), if available (see Section C, CONTRACTOR FURNISHED AVIONICS SYSTEMS).

C.7 AIRCRAFT GENERAL REQUIREMENTS

The Helicopter and accessories shall be in operable condition and present a neat and clean appearance. Upholstery, paint, and plexiglass shall be in good condition.

(1) Center of Gravity -

(A) All aircraft shall be configured so that the center of gravity will remain within the FAA-approved Flight Manual published limits for all load requirements and full range of fuel conditions, including ferry with minimum crew without subtraction or addition of ballast.

(B) All aircraft shall be loaded such that the center of gravity will remain within allowed limits during the flight. Actual weights will be used for flight calculation.

(C) If the equipped weight of the aircraft as noted by registration number in the SCHEDULE OF ITEMS changes, the Contractor must notify the Contracting Officer of the change and a new weight and balance as required by the Federal Aviation Regulations (FAR) must be submitted.

C.8 AIRCRAFT EQUIPMENT

In aircraft designed for a single occupant (KMAX for example), any reference to observer, co-pilot or check pilot does not apply except where the intent of the requirement is applicable to a single occupant aircraft. In these instances, the requirement shall be followed substituting the word Pilot for observer, co-pilot or check-pilot.

C.9 GENERAL EQUIPMENT (STANDARD AND LIMITED USE)

Helicopters shall be configured with the equipment required by applicable FAR's and approved for make and model furnished.

(1) Instrumentation required by the type certificate and applicable FAR's for use with the make and model furnished.

(2) Free-air temperature gauge.

(3) Approved aircraft lighting for night operation in accordance with FAR 91.209, plus instrument lights.

(4) One set of individual lap belts for each occupant.

(5) First Aid Kit - In accordance with Section J, LIST OF ATTACHMENTS. Must be installed in the cabin area.

(6) Survival Kit - In accordance with Section J, LIST OF ATTACHMENTS.

(7) One cargo hook that may be loaded and locked in a single motion with one hand, and is rated at the maximum lifting capacity of the aircraft.

Helicopters for which an automatic locking cargo hook is not available are exempt from this requirement provided the cargo hook which is provided complies with the FAR applicable to the model aircraft.

The cargo hook and associated systems shall be completely disassembled, inspected, lubricated, if required, and subjected to an operations check in all operating modes at two year intervals. The inspection and maintenance shall be accomplished in accordance with the manufacturers operating and maintenance instructions as supplemented by this requirement.

(8) Helicopters shall be provided with adequate tie-down straps, nets, or other devices for securing cargo in the cabin or cargo compartment. These devices shall be simple in function and have the capability of being installed quickly.

(9) FAA approved double-strap shoulder harness with automatic locking inertia reels for each front seat occupant. Shoulder straps and lap belts shall fasten with one single-point, metal-to-metal, quick-release mechanism. (Standard factory shoulder harnesses are acceptable for Aerospatiale and Bell transport category Helicopters. Military style harnesses are acceptable).

(10) One variable capacity bucket commensurate with the maximum lifting capabilities of the aircraft.

Environmental operating conditions may dictate the need for more than one size bucket. Use of a water bucket at a quantity less than the manufacturer's minimum adjustment level is not authorized.

Capacity at each position or adjustment level will be marked on the bucket. Collapsible buckets with cinch straps will only be adjusted to the marked graduations. Attempts to establish intermediate graduations or capacities below manufacturer recommendation (tying knots, etc.) is prohibited as this results in estimated capacities and may interfere with the release mechanism. No partial dips are authorized.

Helicopters equipped with electronic helicopter hook load measuring systems (load cells) that provide a cockpit readout of the actual external load and a bucket that is equipped with a gating system that allows part of the load to be dispensed while retaining the remainder of the load are approved.

The bucket gate open/close switch(es) shall be spring loaded to the "OFF" position, and except for reciprocating engine-powered helicopters with twist grip throttles, shall be mounted on the collective. The switch shall be of a different design and shall be mounted in such a way as to not easily be confused with the RPM Control [Beep] switch.

The Jettison arming switch shall be in the armed position during dropping operations.

NOTE: When a bucket is attached directly to the cargo hook, it is critical to measure the maximum length of the extended bucket from the shackle on the control head to from the extended dump valve/fire sock, making sure that it is at least 6 inches less than the distance from the belly hook to the closest possible point on the tail rotor. Lines attached between the cargo hook and the bucket shall extend the bucket past the outside arc of the tail rotor.

(11) On Type II Helicopters, a convex mirror for observation of sling loads and landing gear.

(12) Dual controls are required for pilot performance evaluations. Dual controls need not be removed from Type I and II aircraft; however, during flight operations the front seat not occupied by the pilot may only be occupied by a co-pilot, qualified Helicopter manager, or a briefed and authorized aerial observer. The pilot shall instruct that individual in proper conduct applicable to a pilot station.

External load operations from other than the manufacturers designated pilot station are allowed only with approved operations specifications, applicable STC's, and appropriate designation on the aircraft interagency data card. The pilot shall occupy the manufacturer's designated pilot station during all but external load operations unless otherwise authorized by the FAA.

(13) High visibility markings on main rotor blades (See Section J, LIST OF ATTACHMENTS).

(14) One or more independently-switched white or white and red strobe light(s) mounted on top of the Helicopter or otherwise visible from above. If the aircraft certification requires the anticollision light to be aviation red, then a white strobe light with an independent activating switch shall be provided in addition to the red strobe.

(15) A complete set of current aeronautical charts covering area of operations.

(16) Contractor may provide equipment to store, inject, and mix fire suppressant/retardant materials in the delivery vessel while in flight. The system shall only require the pilot to select a mix ratio and to start the mix sequence, all other functions shall be automatic.

The Government will supply the suppressant/retardant concentrate. The Contractor, at his/her option, may furnish the suppressant/retardant. In which case, the

Government will replace the quantity used or reimburse the Contractor at cost. Mix ratios will vary from 2/10th of one percent to one percent. Written operating procedures shall be provided for the pilot. These instructions shall include charts and/or tables for part load operations.

Each system shall be approved by the Contracting Officer prior to use. Contractors are expected to use due care in designing the equipment and in the selection of construction materials. See Section H.

(17) The fire extinguisher(s) as required by 14 CFR 135 shall be a hand-held bottle, with a minimum of 2-B:C rating and mounted with a quick release attachment accessible to the flight crew while seated. The fire extinguisher shall be maintained in accordance with NFPA 10 or the Contractor's 135 Operations Manual.

C.10 EQUIPMENT - HELICOPTERS AWARDED AS STANDARD USE

(1) One digital hour meter shall be installed in a location visible from the cockpit. The meter shall be wired in series with a switch on the collective control, and a switch activated by engine or transmission oil pressure or equivalent system, to record flight time only.

(2) Helicopters with a floor height greater than 18 inches shall have an approved personnel access step to assure safe entrance and exit from each door of the Helicopter. A section of external cargo rack may be utilized as a step by providing a clear space covered with non-skid material.

(3) FAA-approved extended height landing gear. (Helicopters for which this landing gear is not available are exempt from this requirement.)

(4) Accessory Power Source (TYPE II HELICOPTERS). A power connector (MS3112E12-3S) protected by a 5-amp circuit breaker connected to the avionics or main aircraft power buss. The connector shall be permanently mounted in a location convenient to passenger compartment. Pin A shall be +24 VDC in 24 volt aircraft, Pin B shall be aircraft ground, and Pin C shall be +12 VDC in 12 volt aircraft. NEVER apply power to both pins A and C simultaneously. See FS/OAS A-16; STANDARD CONNECTORS, section J, List of attachments.

C.11 EQUIPMENT - HELICOPTERS AWARDED AS LIMITED USE

(1) One digital hour meter shall be installed in a location readily accessible. The meter shall be wired in series with a switch on the collective control, and a switch activated by engine or transmission oil pressure or equivalent system, to record flight time only.

C.12 AIRCRAFT AVIONICS

(1) General.

(A) The following required avionics systems shall be furnished, installed, and maintained by the Contractor in accordance with the manufacturer's specifications and the installation and maintenance standards of Section. C.12 (6).

(B) A complete set of schematic and wiring diagrams, covering all installed avionics systems, shall be carried aboard each aircraft or the aircraft's dedicated service vehicle.

(2) Communications systems:

(A) One Emergency Locator Transmitter (ELT). An automatic-portable/automatic-fixed or automatic-fixed ELT utilizing an external antenna and meeting the same requirements as those detailed for airplanes in 14 CFR 91.207 (excluding section f.), shall be installed per the manufacturer's installation manual, in a conspicuous or marked location.

NOTE: ELT's certified under TSO-C91 will not be acceptable after January 1, 2005. Acceptable ELT's shall be certified under TSO-C91a and TSO-C126.

(B) One panel mounted VHF-AM aeronautical transceiver (VHF-1), operating in the frequency band of 118.000 to 135.975 MHz, with a minimum of 720 channels in no greater than 25 kHz increments, and a minimum of 5 watts carrier output power.

NOTE: One (minimum) 760 channel VHF-AM aeronautical transceiver operating from 118.000 to 136.975 MHz shall be required on January 1, 2005.

(C) One aeronautical VHF-FM radio transceiver (FM-1).

1. The transceiver shall operate from 150 to 174 MHz, permit the operator to program any usable frequency within that band while in flight, provide operator selection of both wide-band (25 kHz bandwidth/5 kHz modulation) and narrow-band (12.5 kHz bandwidth/2.5 kHz modulation) operation by channel for MAIN and GUARD operation.

2. Carrier output power shall be 10 watts nominal. The transceiver shall be capable of displaying receiver and transmitter operating frequency. Shall provide both receiver and transmitter activation indicators for MAIN and GUARD. Simultaneous monitoring of both MAIN and GUARD (168.6250 MHz) is required. Scanning of GUARD is not acceptable.

3. A CTCSS sub-audible tone encoder with a minimum of 32 standards selectable tones shall interface with the above radio. The encoder shall be capable of encoding a 110.9 Hz tone on all GUARD transmissions.

4. The transceiver's operational controls shall be mounted in a location that is convenient to both pilot and co-pilot/observer. The transceiver shall meet the

specifications provided in Section J, FS/OAS A-24; AVIONICS
OPERATIONAL TEST PROCEDURES

5. Aircraft having two or more aeronautical VHF-FM radio transceivers need only have a GUARD receiver in the first transceiver (FM-1) unless one is Project 25 digital compliant and the other is not.

6. Aeronautical VHF-FM radio transceivers currently accepted.

Eureka Radio Systems (ERS)	ERS-96000NB*
Northern Airborne Technology	NPX-138N-050 & NTX-138-050
Technisonic Industries	TFM-138 (serial # 1540 & up), TFM-138B/C/D, TDFM-136, & TFM-500
Wulfsburg Electronics	Flexcom II, RT-138*, & RT-9600*

* Require narrowband modification installation.

(D). Provisions for an auxiliary VHF-FM (AUX-FM) portable radio:

1. The Contractor shall provide the necessary interface for installing and properly operating an auxiliary VHF-FM portable radio through the aircraft's audio control system(s). The interface shall consist of the appropriate wiring from the audio control system, terminate in an MS3112E12-10S type connector and utilizing the contact assignments as specified by drawing FS/OAS-17, Section J, List of Attachments.

2. One weatherproof, external, broadband antenna (Comant type CI-177 or equal) covering the 150-174 MHz band, with associated RG-58A/U (or equivalent) coaxial cable and connector, terminated in a bulkhead-mounted, female BNC connector adjacent to the above 10-pin connector.

3. Mounting facilities, in accordance with the specifications of FAA Advisory Circular AC 43.13-2A, for secure installation of the auxiliary VHF-FM portable radio in the cockpit shall be provided. The location of the mounting facilities shall be such that, when connected with an 18-inch adapter cable, allows the co-pilot/observer full and unrestricted movement of the radio's controls.

4. Positive-polarity microphone excitation voltage shall be provided to the AUX-FM system from the aircraft DC power system through a suitable resistor network. A blocking capacitor shall be provided to prevent the portable radio microphone excitation voltage from entering the system. Sidetone for the AUX-FM shall also be provided (NAT AA34, Premier PA-34, or equivalent).

5. In lieu of the above AUX-FM requirements, the Contractor may substitute one aeronautical VHF-FM radio transceiver (FM-2) which meets the same requirements as FM-1 unless the second aeronautical VHF-FM radio transceiver (FM-2) is specifically required. When two aeronautical VHF-FM radio transceivers are required, the AUX-FM is also required.

(3) Navigation systems:

(A) Global Positioning System (GPS). One panel-mounted GPS shall be permanently installed in the aircraft. The GPS shall reference latitude and longitude coordinates for aircraft positioning, utilize an approved, fixed, external aircraft antenna, and be powered by the aircraft electrical system. The GPS unit must have the ability for manual entry of waypoints in flight. The GPS shall have a data base (VFR and in route units not over one (1) year old and for IFR Approach units not over 28 days old) covering the continental United States and Alaska. Handheld and/or marine type equipment is not acceptable.

(B) One Transponder and Altitude Encoder. ATC transponder and altitude reporting system(s) must meet the requirements of 14 CFR 91.215 (a) and (b), 14 CFR 91.413 and be tested and inspected every 24 calendar months as specified by 14 CFR Part 43, appendix F.

(C) One Static Pressure System, Altimeter Instrument System, and Automatic Pressure Altitude Reporting System (Static System). The aircraft's static system(s) shall be maintained in accordance with the IFR requirements of 14 CFR 91.411, and inspected and tested every 24 calendar months as specified by 14 CFR Part 43, appendix E.

(4) Audio Control System(s).

(A) General.

1. LIMITED USE. An audio control system shall be provided for the pilot and check/co-pilot. The system shall provide controls for selection of multiple receiver audio outputs and transmitter microphone/PTT audio inputs. The system shall also provide separate controls for adjustment of both Intercommunication System (ICS) and receiver audio output levels.

Note: ICS not required for aircraft designed for a single occupant (i.e. K-MAX).

2. STANDARD CATEGORY. Two audio control systems (which may be combined in a single unit) shall be installed providing the pilot and observer/co-pilot separate systems. Each system shall provide pilot and observer/co-pilot with separate controls for selection of multiple receiver audio outputs and transmitter microphone/PTT audio inputs. Each system shall also provide pilot and observer/co-pilot with separate controls for adjustment of both ICS and receiver audio output levels.

(B) Transmitter selection and operation.

1. LIMITED USE. A transmitter selection control shall be provided for the microphone/PTT inputs of the pilot and check/co-pilot. The system shall be configured so that the pilot or check/co-pilot may select and utilize a transmitter via their microphone/PTT. Whenever a transmitter is selected, the companion receiver audio shall automatically be selected. Transmitter

sidetone audio shall be provided for the operator as well as for cross monitoring.

2. STANDARD CATEGORY. Separate transmitter selection controls shall be provided to the microphone/PTT inputs of both the pilot and observer/co-pilot. The system shall be configured so that the pilot and observer/co-pilot may each simultaneously select and utilize a different transmitter (or PA system when installed) via their respective microphone/PTT. Whenever a transmitter is selected, the companion receiver audio shall automatically be selected for the corresponding earphone. Transmitter sidetone audio shall be provided for the user as well as for cross monitoring via the corresponding receiver selection switch on the other audio control system.

(C) Receiver selection and operation.

1. LIMITED USE. Separate controls shall be provided for selection of audio from one or any combination of available receivers.

2. STANDARD CATEGORY. Separate controls shall be provided for both pilot and observer/co-pilot to select audio from one or any combination of available receivers. The aft exit passenger positions shall monitor the receiver(s) as selected by the observer/co-pilot (two positions minimum).

(D) Radios and systems.

1. As a minimum, the audio control system(s) shall provide for selection of all installed radios and PA systems.

(E) Earphones and microphones - STANDARD CATEGORY.

1. The audio system shall be designed for operation with 600-ohm earphones and carbon-equivalent, noise-canceling boom-type microphones (Gentex electret type Model 5060-2, military dynamic type M-87/AIC with CE-100 TR preamplifier, or equivalent) with U-92A/U type connector plugs. The pilot's position only may be configured for low impedance (dynamic) operation.

2. All earphone/microphone jacks in the aircraft shall be U-92A/U type, which will accept the U-174/U type plug.

(F) Push-to-talk (PTT) operation.

1. LIMITED USE. Separate PTT switches shall be provided for radio transmission and ICS microphone operation at the pilot and check/co-pilot positions.

2. STANDARD CATEGORY. Separate PTT switches shall be provided for radio transmitter and ICS microphone operation at the pilot and observer/copilot positions. The pilot's PTT switches shall be mounted on the cyclic control. The observer/co-pilot's PTT switches shall be mounted on the

cord to the earphone/microphone connector or utilize a foot switch-operated PTT system. In aircraft requiring two pilots the observer/co-pilot's PTT system may be on the cyclic control. The aft exit passenger positions shall be equipped with an ICS PTT switch mounted on the cord to the earphone/microphone connector (two positions minimum).

(5) Intercommunications System (ICS).

(A) LIMITED USE. An ICS system shall be provided for the pilot and check/co-pilot. ICS audio shall mix with, but not mute, selected receiver audio. An ICS audio level control shall be provided for each position above. Adjustment of the ICS audio level at any position shall not affect the level at any other position. A "hot mic" capability, controlled via an activation switch or voice activation (VOX), shall be provided. ICS sidetone audio shall be provided for the earphone corresponding with the microphone in use.

Note: ICS not required for aircraft designed for a single occupant (i.e. K-MAX).

(B) STANDARD CATEGORY. An ICS system shall be provided for the pilot, observer/co-pilot, and the aft exit passenger positions (two positions minimum). ICS audio shall mix with, but not mute, selected receiver audio. An ICS audio level control shall be provided for each position above. Adjustment of the ICS audio level at any position shall not affect the level at any other position. A "hot mic" capability, controlled via an activation switch or voice activation (VOX), shall be provided for the pilot and observer/co-pilot. ICS sidetone audio shall be provided for the earphone corresponding with the microphone in use.

(6) AVIONICS INSTALLATION AND MAINTENANCE STANDARDS.

(A) All avionics systems used in or on the aircraft for this contract and their installation and maintenance shall comply with all manufacturers' specifications and applicable Federal Aviation Regulations contained within 14 CFR.

(B) Strict adherence to the recommendations in FAA AC 43.13-1B Chapter 11, "Aircraft Electrical Systems", and Chapter 12, "Aircraft Avionics Systems", as well as AC 43.13-2A Chapter 1, "Structural Data", Chapter 2, "Radio Installation", and Chapter 3, "Antenna Installation", is required.

(C) All avionics systems requiring an antenna shall be installed with a properly matched aircraft-certified, broadband antenna unless otherwise specified.

(D) Antennas shall be polarized as required by the avionics system and have a VSWR less than 2.5 to 1.

(E) Required avionics systems and contractor offered avionics/communication equipment must meet the performance specifications as specified in Section J, FS/OAS A-24; AVIONICS OPERATIONAL TEST PROCEDURES.

(F) Labeling and marking of all avionics equipment shall be clear, understandable, legible, and permanent. Electronic label maker marking is acceptable.

(G) Avionics equipment mounting location and installation shall not interfere with passenger safety, space, and comfort. Avionics equipment will not be mounted under seats designed for deformation during energy attenuation. In all instances, the designated areas for collapse shall be protected.

C.13 AIRCRAFT MAINTENANCE

(1) The Contractor shall be capable of providing field maintenance support to each Helicopter for extended periods during heavy use.

(2) Helicopters shall be operated and maintained in accordance with applicable Federal Aviation Regulations and manufacturer's recommendations. Special equipment and/or modification of the Helicopter to meet requirements of this contract will be inspected, repaired, and altered in accordance with AC 43.13-1A and AC 43.13-2A and, if required, be FAA approved. All "time change" components, including engines, shall be replaced upon reaching the factory recommended time, or FAA approved extension if applicable. Aircraft operated with components and accessories on approved TBO extension programs are acceptable, provided the Contractor who provides the aircraft is the holder of the approved extension authorization (not the owner if the aircraft is leased), and shall operate in accordance with the extension.

(3) Compliance with mandatory manufacturer's Bulletins, FAA Airworthiness Directives (AD), and the correction of maintenance deficiencies shall be accomplished prior to the start and during the period of contract performance.

(4) All maintenance performed shall be recorded in accordance with FAR 43 and FAR 91 including Helicopter time-in-service and hour meter reading.

(5) A copy of the current maintenance record required by FAR 91.417 shall be in the Helicopter or kept at the Base of Operations.

(a) Maintenance of aircraft records shall be in accordance with the Federal Aviation Administration Advisory circular No. 43-9C as amended.

(6) The Contractor shall immediately notify the Contracting Officer of any change of an engine, power train, control, or major airframe component and circumstances inducing the change.

(7) Routine maintenance including pre- and post- flight inspections shall be performed before or after the daily standby or as approved by the Contracting Officer.

(8) The aircraft's required weight and balance data shall be determined by actual weighing of the aircraft within 24 calendar months preceding the starting date of the contract, or renewal period, and following any major repair or major alteration or change to the equipment list which significantly affects the center of gravity of the aircraft.

All weighing of aircraft shall be performed on scales that have been certified as accurate within the preceding 24 months. The certifying agency may be any accredited weights and measures laboratory.

A list of equipment installed in the aircraft at the time of weighing must be compiled . Items which may be easily removed or installed for aircraft configuration changes (seats, doors, radios, cargo hook, baskets, special mission equipment, etc.) shall also be listed including the name, the weight and arm of each item. Each page of the equipment list must identify the specific aircraft weighed by at least serial number or registration number of the aircraft. Each page of the equipment list will also be dated indicating the last date of weighing or computation. The weight and balance must be revised each time new equipment is installed or old equipment is removed. Weight and balance procedures under 14 CFR Parts 135.23(b) and 135.185 are acceptable.

(9) A maintenance check flight shall be performed at the Contractor's expense following overhaul, repair, and replacement of any engine, power train, rotor system or flight control equipment, and following any adjustment of the flight control systems before the Helicopter resumes service. The result of the check flight shall be recorded in the aircraft records by the Pilot.

(10) Turbine Engine Power Assurance Checks. The first day of operation and after each 10 (ten) hours of operation, a power assurance check shall be accomplished in accordance with the Helicopter flight manual. The results shall be recorded on form HMC-4 that is provided by the Government. A trend of these power checks shall be maintained on form FS-5700-23. The results of each power check shall be provided to the Helicopter Manager for recording in the daily log. Helicopters with power output below the minimum published performance charts shall be removed from service. The low power condition must be corrected before return to service.

C.14 FUEL SERVICING VEHICLE SPECIFICATIONS

C.15 FUEL SERVICING VEHICLE GENERAL

(1) An approved fuel servicing vehicle (truck, trailer, pumphouse) shall be provided with each Helicopter. The fuel servicing vehicle shall be inspected annually by the Government and shall be stationed at the Base of Operation unless dispatched by the Contracting Officer. Vehicle shall display a current USDA-FS or USDI-OAS inspection sticker.

(2) The fuel servicing vehicle shall be capable of transporting fuel over rough mountainous terrain to include grades of up to 9 percent or more.

(3) Fuel servicing vehicles shall be properly maintained, clean, and reliable. Tanks, plumbing, filters, and other required equipment shall be free of rust, scale, dirt, and other contaminants. Trailers used for storage and transport of fuel shall have an effective wheel braking system.

(4) Spare filters, seals, and other components of the fuel servicing vehicle filtering system shall be stored in a clean dry area. A minimum of one set is required to be with the vehicle.

(5) The fuel tank capacity shall be sufficient to sustain 8 hours flight. Barrels are not acceptable. The fuel servicing vehicle manufacturers' gross vehicle weight (GVW) with a full fuel tank shall not be exceeded.

(6) All tanks will be securely fastened to the truck bed and shall have a sump or sediment settling area of adequate capacity to provide uncontaminated fuel to the filter.

(7) A 10-gallon-per-minute flow rate delivered by the filter and pump from the nozzle is the minimum size acceptable. Filter and pump sizes shall be compatible with the Helicopter being service.

(8) A filter manufacturer's Operating, Installation and Service Manual shall be with the fuel servicing vehicle. Filters shall be changed in accordance with the manual's instructions.

(9) Gasoline engine driven pumps shall have shielded ignition system and Forest Service approved spark arrestor. Other exposed terminal connections shall be insulated to prevent sparking in the event of contact with conductive material.

(10) All refueling pumps regardless of power source shall be listed for use with petroleum products (e.g. UL, FM etc.).

C.16 FUEL SERVICING VEHICLE EQUIPMENT

(1) Each aircraft fuel servicing tank vehicle shall have two fire extinguishers, each having a rating of at least 20-B:C with one extinguisher mounted on each side of the vehicle. Extinguishers shall comply with NFPA 10 Standards for Portable Fire Extinguishers.

(2) Fuel tanks shall be designed to allow contaminants to be removed from the sediment settling area.

(3) Only hoses designed for dispensing of the type of Aviation fuel being utilized will be used. Hoses that comply with API BULL 1529 hose Type C, Type F and Type CT are known to meet this requirement. Hoses shall be kept in good repair and stored on a mechanized reel on the fuel servicing vehicle. .

(4) Fuel nozzle shall include a 100 mesh or finer screen (except for closed circuit nozzles), a dust protective device and a bonding clip or plug. No hold-open devices will be permitted.

(5) An accurate fuel metering device for registering quantities in U.S. gallons of fuel pumped shall be provided. The meter shall be positioned in full view of the fuel handler while fueling the Helicopter.

(6) Fuel servicing vehicle shall have adequate bonding cables.

(7) Fuel servicing vehicle shall comply with Department of Transportation and Environmental Protection Agency requirements for transportation and storage of fuel, and shall carry sufficient petroleum product absorbent pads or materials to absorb or contain up to a 5 gallon petroleum product spill. The Contractor is responsible for cleanup of all product spills and disposal of all products used in the cleanup of a spill in accordance with the EPA, CFR 40 Part 261 and 262..

C.17 FUEL SERVICING VEHICLE MARKINGS

(1) Each fuel servicing vehicle shall have "NO SMOKING" signs with 3-inch minimum letters visible from both sides and rear of vehicle.

(2) Each vehicle shall also be conspicuously and legibly marked to indicate the nature of the fuel. The marking shall be on each side and the rear in letters at least 3 inches high on a background of sharply contrasting color such as Avgas by grade or jet fuel by type.

EXAMPLE: Jet-A white on black background, Avgas 100 white on green background.



(3) All fuel servicing vehicles must be placarded in accordance with 49 CFR 172

C.18 FUEL SERVICING VEHICLE FILTERING SYSTEM

(Three-Stage or Single-Stage is acceptable)

(1) The first and third stage elements of a three-stage system and the elements of a single-stage system shall be new and installed by the Contractor during the annual inspection and witnessed by the Government Inspector. The separator element (Teflon screen) of the three-stage system shall be inspected and tested as prescribed by the manufacturer during the inspection. The filter assembly shall be placarded with that data.

(2) If equipped with a drain, the bottom of the filter assembly shall be mounted to allow for draining and pressure flushing into a container. If the unit is drained overboard, the fuel shall not come in contact with the exhaust system or the vehicle's wheels. If the unit is equipped with a water sight gauge, the balls shall be visible.

(A) Three-Stage (filter, water separator, monitor) System: Fueling systems shall utilize a three-stage system such as a Facet Part Number 050970-M2 for 20 gallon per minute pump, or equal. A Facet Part Number 050971-M2 for a 10 gallon-per-minute (g.p.m.) pump, or equal. An acceptable third stage (monitor) unit is Velcon C.F. 220K for 20 g.p.m. flow or Velcon C.F. 210K for 10 g.p.m. systems.

(B) Single-Stage System or Three-in-One Filter Canister: Fueling systems shall utilize a single element system such as a Velcon filter canister with Aquacon cartridge of a size compatible with pumps flow rate. Differential pressure gauge(s) shall be installed and readable.

EXAMPLE: Velcon™ VF-61 canister with an ACO-51201C cartridge.

C.19 FUELING

(1) All aircraft fuel shall be supplied by the Contractor unless the Government exercises the option of providing fuel. All fuel provided by the Contractor will be commercial grade aviation fuel. Only fuel meeting the specifications of American Society for Testing and Materials (ASTM) D-1655 (Type Jet A, A-1, or B), MIL T-5624 (Grade JP-4 or JP-5) for turbine engine powered aircraft and ASTM D-910 (Avgas Grade 80, 100, or 100LL) for reciprocating engine powered aircraft are authorized for use. Copies of purchase documents will be kept until the completion of the contract period or 30 days after the delivery date of the fuel, whichever comes first.

(2) Fueling operations, including storage and handling, shall comply with the airframe and engine manufacturer's recommendations and all applicable FAA standards. [NFA 407, Aircraft Fuel Servicing, shall be followed except that no passengers may be on board during fueling operations.] Additionally, if storage facilities contain more than 1,320 gallons in total or any one single container contains more than 660 gallons, then the regulations of the Environmental Protection Agency (EPA) shall apply; see Title 40, Code of Federal Regulations, Part 112 (40 CFR 112).

(3) Fuel shall pass through a filtering system, as outlined in Section C, FUEL SERVICING VEHICLE FILTERING SYSTEM, in accordance with the filter manufacturer's recommendations.

(4) If requested by the government and the contractor has been approved, Rapid Refueling of Helicopters is permitted in accordance with NFA 407 5-21. There are two approved methods of Rapid Refueling:

(1) **Closed Circuit Refueling (CCR).** This method of refueling uses a CCR system designed to prevent spills, minimized fuel contamination, and prevent escape of flammable fuel vapors.

(2) **Open Port.** This method of refueling allows flammable fuel vapors to escape.

Rapid refueling of helicopters is permitted if requested by the Government, and the Contractor meets the following requirements:

Rapid refueling procedures in accordance with NFA 407 -21 are contained in the Contractor's FAA approved Operations Specifications and the type of "rapid refueling" is specified on the aircraft approval card.

Notwithstanding NFA 407 5-21.2(b), a pilot is seated at the controls of the aircraft during refueling operations.

The aircraft is shut down every 2 ½ hours of continuous operation.

Personnel providing onsite fire protection are briefed on the Contractor's rapid refueling procedures.

(5) Government personnel shall not refuel Contract aircraft unless the pilot requests Government assistance due to an emergency situation; or when the Government provides the fuel servicing system and dispensing personnel.

(6) Fuel quality control procedures are outlined in Section J, LIST OF ATTACHMENTS.

(7) All smoking is prohibited within 50 feet of fuel servicing vehicles and aircraft.

C.20 PERSONNEL SPECIFICATIONS

C.21 PILOT REQUIREMENT GENERAL

The Contractor shall furnish pilots as specified in the SCHEDULE OF ITEMS.

- (1) At time of carding, each pilot shall display:
 - (A) Commercial or Airline Transport Pilot Certificate with appropriate rating (Rotorcraft-Helicopter) and a valid Class I or Class II FAA medical certificate.
 - (B) Written evidence of qualification to transport external loads.
 - (C) Standard Use Helicopters: Written evidence of passing an FAA annual flight check as required by FAR, Part 135 in the aircraft make and model furnished.
- (2) Pilot shall display upon demand to any official involved in flight operations:
 - (A) An Agency Pilot Qualification Card issued by a designated inspector of Pilots.
- (3) At the Contracting Officer's discretion, each pilot shall pass an Agency flight check in make, model, and series over typical terrain.
- (4) Pilots may function as mechanics providing:
 - (A) The pilot meets all the requirements for a mechanic as listed in Section C, Mechanic Requirements.
 - (B) The normal pilots duty limitations will apply to the pilot when functioning as a mechanic.
 - (C) During unavailability, mechanic duties in excess of 2 hours will apply as flight time on a one-to-one basis toward flight hour limitations.
- (D) A mechanic, other than the pilot, shall perform 50-hour, 100-hour, or progressive inspections.
- (5) Pilots may, in accordance with FAR 43.3(h), 43.5 and 43.7, perform preventive maintenance on the aircraft.
- (6) Pilots must speak English fluently.

C.22 PILOT EXPERIENCE REQUIREMENTS

(1) All Activities. Pilots shall have accumulated as Pilot-in-Command the minimum flight times listed below. Flight time shall be determined from a certified Pilot log. Further verification of flight hours may be required at the discretion of the Contracting Officer.

MINIMUM	FLIGHT HOURS

Helicopter	1,500
Helicopter, preceding 12 months	100
Weight Class <u>1/</u>	100
Turbine Engines <u>2/</u>	100
Reciprocating Engines <u>3/</u>	200
Make and Model,	50 <u>4/</u>
Make, Model and Series, Preceding 12 months	10 <u>5/</u>
Helicopter, last 60 days	10
Mountainous Terrain <u>6/</u>	200
Mountainous Terrain in Make and Model	10

FOOTNOTES:

- 1/ Weight Class -
 Type I: No less than 16 seats (including Pilot), 5000 lbs. Card weight capacity, and 700 gallons retardant capacity.
 Type II: 9-15 seats, 2500-4999 lbs card weight capacity, and 300-699 gallons retardant capacity.
 Type III: 5-8 seats, 1200-2499 lbs card weight capacity, and 100-299 gallons retardant capacity.
 Type IV: 3-4 seats, 600-1199 lbs card weight capacity, and 75-99 gallons retardant capacity.
- 2/ Applicable if turbine engine Helicopters are offered.
- 3/ Applicable if reciprocating engine Helicopters are offered.
- 4/ Pilot flight hour requirements in make and model may be reduced by 50 percent if pilot shows evidence of satisfactorily completing the manufacturer's approved ground school and flight checkout in the make, model, and series offered.
- 5/ A list of aircraft make, model, and series is provided in Section J. This list does not specifically follow the FAA guidelines as it relates to 14 CFR 135.293 competency.
- 6/ Pilot in command mountainous terrain experience is defined as: Experience in maneuvering a Helicopter at density altitudes of over 5000 feet to include numerous take off and landings in situations indicative to difficult mountainous terrain. This terrain consists of abrupt, rapidly rising terrain resulting in a high land mass projecting above its surroundings, wherein complex structures in which folding, faulting, and igneous activity have taken

part. These mountainous areas produce vertical mountain winds, turbulence associated with mountain waves, producing abrupt changes in wind direction often resulting in up flowing or down flowing air currents

(2) Equipment Experience. Pilots shall display evidence of experience in using all equipment specifically identified in Section C for performance of contract work (bucket, fixed tank operations, GPS, etc.), as well as equipment identified in Section B. Pilots may be required to demonstrate proficiency with equipment during an Agency evaluation.

C.23 PILOT FLIGHT AND DUTY LIMITATIONS

(1) All pilots will be limited to the following tours of duty and flight hours. All revenue-producing flying time, whether under this contract or not, will count toward the limitations.

(A) Flight time shall not exceed a total of 8 hours per day.

(B) Flight time shall not exceed a total of 42 hours in any 6 (six) consecutive days.

(C) Pilot accumulating 36 or more hours of flying in any 6 (six) consecutive days shall be off duty the next day. After any one full day off, pilots begin a new six consecutive day duty period for the purposes of this clause, providing the requirements of paragraph (F) of this clause are not exceeded.

(D) Duty of any kind shall not exceed 14 hours in any 24 hour period. Within any 24-hour period, pilots shall have a minimum of 10 consecutive hours off duty immediately prior to the beginning of any duty day. Local travel up to a maximum of 30 minutes each way between the work site and place of lodging will not be considered duty time.

(E) Duty includes flight time, ground duty of any kind, and standby or alert status at any location.

(F) During any 14 consecutive days, pilots shall be off duty for two(2) full calendar days except as noted below. Days off duty need not be consecutive.

Note: Pilots crewing a dual-pilot Type I aircraft, may offer on the schedule of items to work a 14 days on, 7 days off schedule. Under this schedule after any 14 consecutive duty days pilots shall be off duty for a minimum of 7 consecutive days. If the schedule is offered it is applicable to all company personnel attached to the aircraft (i.e. mechanics, fuel service vehicle drivers, etc.) and must remain in effect for the duration of the contract.

(G) During times of prolonged heavy fire activity, Federal Agencies may issue a notice reducing the pilot duty day and/or increasing days off on a geographical or Agency-wide basis.

(2) Flights point-to-point (airport to airport, heliport to heliport, etc.) with a pilot and co-pilot shall be limited to 10 (ten) hours per day. (A Helicopter that departs airport A, flies reconnaissance on a fire, then flies to airport B, is not point-to-point).

(3) Pilots flying missions covered in the above paragraph, who are also flying other missions, shall also be limited to the flight hour limitations in Section C, PILOT REQUIREMENTS, FLIGHT AND DUTY LIMITATIONS.

(4) When the available flight hours within the limitations of paragraphs (1) or (2) above are reduced due to non-contract flying, the payment will be reduced as provided in the contract.

(5) Pilots may be relieved from duty for fatigue or other causes created by unusually strenuous or severe duty before reaching duty limitations.

(6) Relief or substitute pilots reporting for duty under any contract may be required to furnish a record of all duty and revenue producing flight time during the previous 14 days.

C.24 CO-PILOT QUALIFICATIONS

Co-pilots (second in command) must meet requirements of operators certificate. They are not issued Agency qualification cards.

C.25 MECHANIC QUALIFICATIONS

(1) The mechanic must have a valid FAA mechanic certificate with airframe and power plant ratings. The mechanic must have held the certificate or foreign equivalent certificate with both ratings for a period of 24 months. The mechanic must have been actively engaged in aircraft maintenance as a certificated mechanic for at least 18 (eighteen) months out of the last twenty-four (24) months immediately preceding the start date of the contract.

(2) The mechanic shall have 12 months experience, as an A&P or foreign equivalent, in maintaining Helicopters (3 months must have been in the last 2 years).

(3) The mechanic must also show evidence of maintaining a Helicopter of the same make and model as offered under "field" conditions for at least one (1) full season. (Three consecutive months maintaining the Helicopter away from Contractor's Base of Operations with minimal supervision will meet this requirement.)

(4) Mechanics must have satisfactorily completed a manufacturer's maintenance course or an equivalent FS or OAS approved Contractor's training program for the make and model of Helicopter offered or, show evidence that he/she has 12 months maintenance experience on a Helicopter of the same make and model offered.

(5) Each mechanic shall furnish upon demand an Interagency Mechanic Qualification Card issued by a designated USDA-FS or USDI inspector or mechanic.

C.26 AVAILABILITY OF MECHANICS

(1) Mechanic shall be available to maintain the Helicopters in satisfactory flying condition. The mechanic shall be provided by the Contractor and shall be in addition to the pilot(s).

(2) When the mechanic serves as the fuel servicing vehicle driver, the more stringent of the duty limitations apply.

C.27 MECHANICS DUTY LIMITATIONS

Mechanics will be limited to the following tours of duty.

(1) Within any 24-hour period, personnel shall have a minimum of eight (8) consecutive hours off duty immediately prior to the beginning of any duty day. Local travel up to a maximum of 30 minutes each way between the work site and place of lodging will not be considered duty time.

(2) Mechanics will have two (2) full calendar days off duty during any 14-day period.

Note: mechanics crewing dual pilot Type I Helicopters must work the same days off schedule as the pilots assigned to the aircraft. See C.23 (F)

(3) Duty includes standby, work, or alert status at any location.

(4) Mechanics may be removed from duty for fatigue or other causes created by unusually strenuous or severe duty before reaching duty limitations.

(5) The mechanic will be responsible to keep the Government apprised of his/her ground duty limitation status.

(6) Relief or substitute mechanics reporting for duty under any contract may be required to furnish a record of all duty time during the previous 14 days.

C.28 FUEL SERVICING VEHICLE DRIVER QUALIFICATIONS

(1) The Contractor shall furnish a fuel servicing vehicle driver for each day the Helicopter is required to be available and supply a relief driver for the fuel vehicle driver's day off.

(2) Each driver will be expected to demonstrate an acceptable knowledge of correct fueling procedures and fueling and safety equipment installed on the fueling vehicle.

C.29 FUEL SERVICING VEHICLE DRIVER DUTY LIMITATIONS

(1) Fuel servicing vehicle drivers shall comply with Department of Transportation Safety Regulation Part 390-399, including duty limitations. It is the Contractors responsibility to insure that employees comply with Department of Transportation Regulations.

(2) Duty includes Standby, Work, or Alert status at any location.

(3) Fuel servicing vehicle drivers may be removed from duty for fatigue or other causes created by unusually strenuous or severe duty before reaching duty limitations.

(4) The fuel servicing vehicle driver will be responsible to keep the Government apprised of his/her ground duty limitation status.

(5) Notwithstanding Department of Transportation Safety Regulation Part 390-399, the fuel servicing vehicle driver shall have a minimum of two (2) full calendar days off duty during any 14-day period. Off duty days need not be consecutive.

Note: fuel service vehicle driver assigned to a Type I helicopter must work the same days off schedule as the pilots assigned to the aircraft. (See C.23 (F))

C.30 PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT

The following personal safety equipment shall be furnished by the Contractor, be operable, maintained in good repair, and shall be required on all revenue producing flights.

(1) Aviators flight helmet, consisting of a one-piece hard shell made of polycarbonate, Kevlar, carbon fiber, or fiberglass, must cover the top, sides (including the temple area and to below the ears), and the rear of the head. The helmet shall be equipped with a chinstrap and shall be appropriately adjusted for proper fit. Flight helmets for helicopter usage must conform to a national certifying agency standard, such as DOT, Snell, SFI, or an appropriate military standard, or appropriate equivalent standard, and be compatible with required avionics. "Shorty" (David Clark™ style) helmets are not approved.

Flight helmets currently meeting this requirement are known to include the SPH-3, SPH-4, SPH-5, SPH-8, HGU-56 & HGU-84.

Helmets designed for use in fixed wing aircraft do not provide adequate protection for helicopter occupants and are not approved for helicopter use.

(2) Head Protection, Additional Contractor Personnel - Contractor personnel while flying under this contract shall wear a protective flight Helmet with chinstrap fastened.

(3) Fire-resistant Clothing

(A) All crew members and additional crew members shall wear long-sleeved shirt and trousers (or long-sleeved flight suit) made of fire-resistant polyamide or aramide material, leather boots and leather, polyamide, or aramide gloves. The shirt, trousers, boots, and gloves shall overlap by at least 2 inches when the Pilot is manipulating the controls. Personnel shall not wear clothing made of synthetic material under the fire-resistant clothing described herein.

(B) Nomex™ or other material proven to meet or exceed specifications contained in MIL-C-83429A may be worn. Currently, the following "other" materials meet this specification:

1. FRT Cotton Denim Cloth, MIL-C-24915
2. FRT Cotton Chambray Cloth, MIL-C-24916

(C) Clothing not containing labels identifying the material either by Brand Name or MIL-Spec will not be acceptable.

(4) Personal Flotation Device - A personal flotation device shall be worn by each individual on board the Helicopter when conducting operations beyond power-off gliding distance to shore, and during all hovering flight operations conducted over water sources such as ponds, streams, lakes, and coastal waters. This equipment shall be maintained in serviceable condition as appropriate to manufacturers directions. Automatic inflation (water activation) personal flotation device will not be allowed on this contract.

(5) Personal Protective Equipment For Ground Operations

While within the safety circle of an operating helicopter, all personnel will wear the following PPE:

Shirt with long sleeves, overlapping the gloves, and long pants overlapping the boots, hard hat with chin strap, hearing protection, eye protection.

Note: Maintenance personnel working on running aircraft are exempt from glove and hard hat requirements

In addition, fuel service vehicle operators will wear non-static clothing and gloves.

C.31 FLIGHT AND GROUND OPERATIONS

(1) CONTRACTOR RESPONSIBILITY

(A) The Contractor is responsible for the security of any equipment provided.

(B) The Contractor shall keep one copy of the contract and modifications in the aircraft at all times while working for the Government.

(2) PILOT AUTHORITY AND RESPONSIBILITY

(A) The Pilot-in-Command is responsible for operating the aircraft within its operating limits, responsible for safety of the aircraft, its occupants, and cargo and shall comply with the directions of the Government, except when in his/her judgment, such compliance will be a violation of applicable Federal or State regulations or contracting provisions. The pilot shall refuse any operation considered hazardous or unsafe.

(B) The pilot shall not permit any passenger to ride in the aircraft or any cargo to be loaded therein unless authorized by the Contracting Officer.

(C) Pilots are responsible for weight and balance control. The Standard Interagency Load Calculation shall be used for this purpose when passengers and/or cargo are/is being transported. Load calculation shall be computed on Form USDA-FS 5700-17 or Form OAS-67. (See Section J, LIST OF ATTACHMENTS).

(3) SUBSTITUTION OF AIRCRAFT AND/OR PERSONNEL

(A) The Contractor may substitute or replace aircraft and personnel meeting contract requirements after receipt of written approval from the Contracting Officer.

(B) Request for substitution shall be made at least 10 (ten) days prior to the proposed exchange, except for unforeseen conditions.

(C) When pilots are exchanged or replaced, training and familiarization costs, including any required flight time up to 3 (three) hours, shall be accomplished at the Contractor's expense. The Contracting Officer will determine the necessary amount of flight time. This is not intended to affect cross-shifting of Pilots that are familiar with the operating area nor to affect approved relief pilots.

(4) SUSPENSION OF PERSONNEL

(A) Pilot - The Contracting Officer may suspend any pilot who flies recklessly, does ineffective work, exhibits fatigue or conduct detrimental to the purpose for which contracted.

Upon classification of a mishap as an "Aircraft Accident" by the NTSB, a pilot operating under this contract will be suspended by the Contracting Officer from performing pilot duties under this contract and any other activity authorized under the Interagency pilot Qualification Cards issued to the pilot.

Upon classification of an incident as an "Incident with Potential" a pilot operating under this contract may be suspended by the Contracting Officer from performing pilot duties under this contract and any other activity authorized under the Interagency pilot Qualification Cards issued to the pilot.

Whenever the Pilot is suspended, the Interagency Pilot Qualification Cards shall be surrendered to the Contracting Officer or his/her designated representative. Suspension will continue until: Rescinded by the Contracting Officer or designated technical representative; or Revocation action is taken by the issuing Agency.

(B) Mechanic - The Contracting Officer may suspend any mechanic who is careless, does poor quality work, exhibits fatigue or conduct detrimental to the purpose for which contracted.

(C) Fuel Servicing Vehicle Driver - The Contracting Officer may suspend any fuel servicing vehicle driver who drives recklessly, exhibits fatigue or conduct detrimental to the purpose for which contracted.

C.32 SPECIAL SAFETY REQUIREMENTS

(1) In order to protect life and health and to prevent damage, the Contractor will use due diligence in preventing accidents and will comply with applicable Federal and State laws.

(2) No equipment such as radios, survival gear, fire tools, etc., shall be located in or on the aircraft in such a manner as to potentially cause damage or obstruct the operation of equipment or personnel.

(3) All smoking is prohibited within 50 feet of fuel servicing vehicle or fueling equipment. Smoking in or around aircraft is also prohibited.

C.33 SAFETY AND ACCIDENT PREVENTION

(1) The Contractor shall furnish a copy of all reports required to be submitted to the Federal Aviation Administration (FAA) by the Federal Aviation Regulations (FAR) that relate to Pilot and maintenance personnel performance, aircraft airworthiness or operations.

Examples of these reports are paragraphs 14 CFR part 135.415 Mechanical Reliability Reports and Part 135.417 Mechanical Interruption Summary Reports required of the FAR, 49 CFR Part 830, and FAA Form 8010-4, Malfunction or Defect Report (see Section J, LIST OF ATTACHMENTS).

(2) Following the occurrence of a mishap, the Contracting Officer will evaluate whether noncompliance or violation of provisions of the contract, the Federal Aviation Regulations applicable to the Contractor's operations, company policy, procedures, practices, programs, negligence on the part of the company officers or employees may have caused or contributed to the mishap. The occurrence of the mishap may constitute default in the performance of the contract. A finding of default under the above cited conditions shall entitle the Government to exercise the right to terminate the contract for cause as provided in the "Contract Terms and Conditions" as stated herein.

(3) The Contractor shall keep and maintain programs necessary to assure safety of ground and flight operations. The development and maintenance of these programs are a material part of the performance of the contract. When, in the sole judgment of the Contracting Officer. The programs will not adequately promote the safety of operations, the Government may terminate the contract for cause as provided in the "Contract Terms and Conditions" as stated herein.

Examples of such programs are (1) personnel activities, (2) maintenance, (3) safety, and (4) compliance with regulations.

(4) The Contractor shall fully cooperate with the Contracting Officer in the fulfillment of this clause. The Contracting Officer may suspend performance of this contract work, during the evaluation period used to determine cause as stated above.

C.34 MISHAP DEFINITIONS

As used throughout this contract, the following terms shall have the meaning set forth below:

AIRCRAFT ACCIDENT - See 49 CFR Part 830.

AIRSPACE CONFLICT - A near mid-air collision, intrusion, or violation of airspace rules.

AVIATION HAZARD - Any condition, act, or set of circumstances that exposes an individual to unnecessary risk or harm during aviation operations.

FATAL INJURY - See 49 CFR Part 830.

INCIDENT - See 49 CFR Part 830

INCIDENT WITH POTENTIAL - An incident that narrowly misses being an accident and in which the circumstances indicate significant potential for substantial damage or serious injury. Classification of an incident as an "Incident with Potential" is determined by the Agency Aviation Safety Manager (ASM).

MAINTENANCE DEFICIENCY - An equipment defect or failure that affects or could affect the safety of operations, or that causes an interruption to the services being performed.

OPERATOR - See 49 CFR Part 830.

SAFECOM - An Agency Aviation Safety Communiqué used to report any condition, observance, act, maintenance problem, or circumstance that has potential to cause an aviation related accident (Form OAS-34 or FS 5700-14).

SERIOUS INJURY - See 49 CFR Part 830.

SUBSTANTIAL DAMAGE - See 49 CFR part 830.

C.35 MISHAPS

(1) MISHAP REPORTING -The Contractor of an aircraft for the Government shall immediately, and by the most expeditious means available, notify the National Transportation Safety Board (NTSB) and the Agency when an "Aircraft Accident" or NTSB reportable "Incident" occurs within any company operations, whether under the contract or not. Also, the Agency shall immediately be notified when an "Incident with Potential" occurs. The toll free 24-hour Interagency Aircraft Accident Reporting Hot Line is: 1-888-4MISHAP (1-888-464-7427).

(2) FORMS SUBMISSION - Following an "Aircraft Accident" or when requested by the NTSB following the notification of a reportable "Incident," the Contractor will provide the Agency with the information necessary to complete a NTSB Form 6120.1/2. The information may be forwarded on the internet as follows: (FS-[<http://205.173.2.4>]or OAS-[www.oas.gov]) The NTSB Form 6120.1/2 does not replace the Contractor's responsibility, within 5 days of an event, to submit to the Agency a "SAFECOM" to report any condition, observance, act, maintenance problem, or circumstance that has potential to cause an aviation-related mishap. Blank SAFECOM's can be obtained from the Agency.

(3) PRESERVATION REQUIREMENTS - The Contractor shall not permit removal or alteration of the aircraft, aircraft equipment or records following an "Aircraft Accident, Incident, or "Incident with Potential" resulting in any damage to the aircraft or injury to personnel until authorized to do so by the Contracting Officer or the designated technical representative. Exceptions are when threat to life or property exists, the aircraft is blocking an airport runway, etc. The Contracting Officer shall be immediately notified when such actions take place. The NTSB's release of the wreckage does not constitute a release by the Contracting Officer, who shall maintain control of the wreckage and related equipment until all investigations are complete.

(4) MISHAP INVESTIGATIONS - The Contractor shall maintain an accurate record of all aircraft accidents, incidents, aviation hazards and injuries to Contractor or Government personnel arising in the course of performance under this contract. Further, the Contractor fully agrees to cooperate with the Agency during an investigation and make available personnel, personnel records, aircraft records, and any equipment, damaged or undamaged, deemed necessary by the Agency.

(5) COSTS RELATED TO INVESTIGATION - The NTSB or Agency will determine their individual Agency investigation cost responsibility. The Contractor will be fully responsible for any cost associated with the reassembly, approval for return-to-service, and return transportation of any items disassembled by the Government.

(6) RESCUE AND SALVAGE RESPONSIBILITIES - The cost of search, rescue and salvage operations made necessary due to causes other than negligent acts of a Government employee shall be the responsibility of the Contractor.

(7) SECURITY OF AIRCRAFT AND EQUIPMENT - The security of any non-Government aircraft, associated vehicles and equipment used under this contract will be the responsibility of the Contractor. When the aircraft is operated by Government Pilots, the security of the aircraft will be the Government's responsibility.

PART I - THE SCHEDULE

SECTION D -- PACKAGING AND MARKING

(For this Solicitation there are NO CLAUSES in this Section.)

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PART I - THE SCHEDULE

SECTION E - INSPECTION AND ACCEPTANCE

E.1 CLAUSES INCORPORATED BY REFERENCE (FAR 52.252-2)(JUN 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

CLAUSE

NUMBER	DATE	TITLE
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None by reference.

E.2 INSPECTION OF SERVICES--FIXED PRICE (FAR 52-246-4) (FEB 1992)

(a) Definition: "Services," as used in this clause, includes services performed, workmanship, and material furnished or utilized in the performance of services.

(b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.

(c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all times and places during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.

(d) If the Government performs inspections or tests on the premises of the Contractor or a subcontractor, the Contractor shall furnish, and shall require subcontractors to furnish, without additional change, all reasonable facilities and assistance for the safe and convenient performance of these duties.

(e) If any of the services do not conform with contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, at no increase in contract amount. When the defects in services cannot be corrected by reperformance, the Government may?

(1) Require the Contractor to take necessary action to ensure that future performance conforms to contract requirements; and

(2) Reduce the contract price to reflect the reduced value of the services performed.

(f) If the Contractor fails to promptly perform the services again or to take the necessary action to ensure future performance in conformity with contract requirements, the Government may--

- (1) By contract or otherwise, perform the services and charge to the Contractor any cost incurred by the Government that is directly related to the performance of such service; or
- (2) Terminate the contract for cause.

E.3 PRE-USE INSPECTION OF EQUIPMENT AND PERSONNEL

(1) After award of the contract and any renewal thereof, an inspection of the Contractor's equipment and personnel will be made. The inspection will take place at a location agreed to by the Contractor and Contracting Officer.

(2) The aircraft, Pilot, relief Pilot, mechanic, fuel vehicle driver, and fuel servicing vehicle shall be made available for inspection as scheduled by the Contracting Officer.

(3) The Contractor shall provide at inspection, a list of FAA Airworthiness Directives and Manufacture's Mandatory Service Bulletins for the make, model, and series of Helicopter offered indicating whether applicable or not. If applicable, the date and airframe total time at compliance, method of compliance, next compliance due date if recurring, and authorized signature and number will be recorded. The list will be similar to that shown in Advisory Circular 43-9 as amended.

(4) A list of all items installed on the Helicopter which are required to be overhauled or replaced on a specified time basis shall be provided. The list shall include the component names, serial numbers, service life (or inspection/overhaul time), total time since major overhaul or inspection, and hours remaining before replacement, overhaul, or inspection. The list will be similar to that shown in Advisory Circular 43-9 as amended.

(5) A mechanic data sheet shall be provided for each mechanic the Contractor intends to use.

(6) The Contractor may be required to furnish a copy of the procedures manual and revisions as required by FAR 135.

(7) Each driver will be expected to demonstrate an acceptable knowledge of correct fueling procedures, and fueling and safety equipment installed on the fuel servicing vehicle, and must meet all Department of Transportation requirements for fuel vehicle drivers. Contractor should have equipment and personnel to change the filter on the fuel service vehicle.

(8) The documents described in the following clauses shall be made available at the initial yearly pre-use inspection:

Section C - Certifications

Section C - Personnel Specifications, Pilot Requirements

General

In addition to documents mentioned in the above clauses:

- Copy of awarded Contract
- Copy of 135 Operations Specifications
- Copy of 133 External Load Operations (aircraft listing)

Copy of 137 Agricultural Aircraft Operations

(9) CONTRACT - Pilots will be given an Agency approved Helicopter Pilot safety briefing at time of carding. Pilot is required to acknowledge receipt of the safety briefing by signature. (Copy available by request from the Contracting Officer).

E.4 PRE-USE INSPECTION EXPENSES

(1) All operating expenses incidental to the inspection shall be borne by the Contractor.

(2) Pilot check rides may require up to two (2) hours of flight time for each Pilot as deemed necessary by the Contracting Officer. All check rides shall be performed in a Helicopter of like make, model, and series as furnished for the contract.

(3) The Contractor will not be charged for the costs incurred by the Government on the initial pre-use inspection.

E.5 REINSPECTION EXPENSES

(1) When reinspection is necessary because Contractor's equipment and/or personnel did not satisfy the initial inspection, reinspection costs incurred by the Government may be charged to the Contractor.

(2) Such costs may include actual costs of transportation, per diem, and overtime of the Government Inspectors. The Contractor shall give advance notice to the Contracting Officer as to the time reinspection is desired.

E.6 INSPECTIONS DURING USE

(1) At any time during the contract period, the Contracting Officer may make tests or inspections as deemed necessary to determine that the Contractor's equipment and/or personnel currently meet specifications. Government costs incurred during these inspections will not be charged to the Contractor.

(2) If the inspections or tests reveal deficiencies that require correction and subsequent reinspection, the costs incurred by the Government may be charged to the Contractor in accordance with Section E, REINSPECTION EXPENSES.

(3) When the aircraft becomes unavailable due to mechanical breakdown, the Government reserves the right to inspect the aircraft after the Contractor's mechanic has approved it for return to service. For items covered under FAR 135.415, the Contractor shall furnish the Contracting Officer with a completed FAA Form 8010-4, Malfunction or Defect Report(see Section J, List of Attachments) or Helicopter Association International Maintenance Malfunction/Information Reporting Form (see Section J, List of Attachments).

E.7 INSPECTION OF SUBSTITUTE EQUIPMENT AND PERSONNEL

Inspection costs incurred by the Government when inspecting substitute personnel and/or equipment subsequent to the initial pre-use inspection may be charged to the Contractor in accordance with Section E, REINSPECTION EXPENSES

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SECTION F - DELIVERIES OR PERFORMANCE

F.1 EFFECTIVE PERIOD OF THE CONTRACT (AGAR 452.212-73) (FEB 1988)

The effective period of this contract is from date of award through May 31, 2003.

F.2 CONTRACT AND PERFORMANCE PERIODS

On a Call-When-Needed (CWN) basis throughout the contract period.

F.3 CONTRACT PERIOD AND RENEWAL OPTION

The contract period shall extend from date of the award through May 31, 2003. However, at the option of the Government, the contract may be renewed for 2 (two) additional years, provided that the Contracting Officer serves notice of intent to renew at least 60 days prior to contract expiration. The renewal will be with the same terms and conditions. Offeror shall bid availability for 3 (three) years (see Section B, SCHEDULE OF ITEMS); however, the base portion of the Government established flight rate will be subject to the provisions of Part II, Section I, ECONOMIC PRICE ADJUSTMENT CLAUSE.

F.4 ORDERING SERVICES

(1) The National Interagency Coordination Center (NICC) located at the National Interagency Fire Center (NIFC) in Boise, ID is the only office authorized by the contracting office to place orders under the contract. Contractors should not accept orders from any other source. Orders for service will be placed with the contractor from time-to-time as needs for the service become known to the Government. Orders will be filled based on performance, cost and urgency. Performance and allowable payload for each aircraft on contract will be calculated by the Government. Computed performance, allowable payload aircraft configuration, and equipment may take precedent over other factors including cost when ordering aircraft.

NOTE: Payload will be computed using best factory chart unless operator submits an FAA approved STC allowing for increased payload. Aircraft with performances enhancing STC's must be able to demonstrate increased performance under environmental conditions equal to the original performance chart.

In the interest of safety, certain additional equipment may be added to the helicopter without penalty to computed performance, as performance relates to ordering priority. When the helicopter is equipped with the following safety items, a credit will be allowed. Each credit is the equivalent to 25 pounds as follows:

APPLIES TO TYPE II HELICOPTERS ONLY

Closed circuit refueling	-	1	credit
Wire cutters	-	2	credits
Conspicuity lighting		2	credits
Instrumentation and approval for left seat operations (Bell helicopters)	-	6	credits
Multi-Engine	-	8	credits

(2) The Government DOES NOT GUARANTEE the placement of any orders for service under this contract and the Contractor is not obligated to accept any orders. However, once the Contractor accepts an order, he/she is obligated to perform in accordance with the terms and conditions stated herein.

F.5 BASE(S) OF OPERATION

The Base(s) of Operation will be assigned by the Contracting Officer.

F.6 ORDERED AVAILABILITY PERIOD(S)

Helicopters and associated equipment and personnel shall be available as ordered by the Contracting Officer and agreed to by the Contractor. Release of the helicopter at the request of the Contractor after a period of availability has begun must be approved by the Contracting Officer.

F.7 DAILY AVAILABILITY REQUIREMENTS

(1) Equipment:

(A) Continental United States - Helicopters and associated equipment will be available 14 hours each day beginning at start of morning civil twilight, unless otherwise specified by the Contracting Officer. Helicopters and associated equipment will not be removed from the Base of Operation without the approval of the Contracting Officer.

(B) Alaska - For work in Alaska, see Section J.

(2) Personnel. Personnel will be in one of the following conditions of availability:

(A) Standby.

FIRE SUPPORT - Personnel will be on standby status each day. The length of the standby period will be set by the Contracting Officer and may be adjusted from day to day. During this time, flying is required on short notice so that no longer than ten (10) minutes elapse from the time dispatch orders are given to the pilot and the time the aircraft is airborne.

PROJECT USE - Personnel will be on standby status each day. The length of the standby period will be set by the Contracting Officer and may be adjusted from day to day. During this time, flight is required within the times established by the Contracting Officer.

(B) Extended Standby.

Hours of standby in excess of the first nine (9) hours may be ordered by the Contracting Officer. See Section J, DEFINITION OF CONTRACT TERMS.

(C) Return-to-Standby (Alert).

The Contractor will inform the Contracting Officer as to how appropriate personnel may be contacted. Subject to Flight and Duty Limitations, these persons will be allowed one (1) hour to return to standby status after the contact attempt is made. Failure to return-to-standby status within one hour will result in loss of availability.

If not requested to be on return-to-standby status, Contractor's personnel will be considered to be off duty and cannot be required to return to duty status that day.

(D) Authorized Breaks.

During the standby period, requirements may be modified by the Contracting Officer to allow Contractor's personnel time off away from the Base of Operation or to conduct routine maintenance. No deduction will be made for such authorized breaks.

F.8 UNAVAILABILITY

(1) The Contractor will be considered to be unavailable whenever the equipment or personnel are not in condition to perform or fail to perform within the requirements of this contract. Also, the aircraft will be considered unavailable when the pilot, mechanic, or fuel servicing vehicle driver cannot perform because of duty limitations unless a relief crew is provided. Unavailability however, will not be assessed when the pilot has reached duty limitations when the conditions in Section C.23 (Flight and Duty Limitations) occur.

(2) Unavailability status will continue until the cause of the failure is corrected. It is the Contractor's responsibility to inform the Contracting Officer whenever the aircraft and crew are again available. Inspection by the Government after a performance failure has occurred will be made as promptly as possible after the Contractor has given notice that the failure has been corrected. When inspection reveals that the failure has been corrected, the Contractor will be deemed in "available" status from the time the Contractor gave notice to the Government of the correction of the failure. If consistent failure to respond to dispatch occur, the Contracting Officer retains the right to require check flights at Contractor's expense.

When the helicopter and flight crew has arrived at the designated base and the fuel servicing vehicle is enroute to the base the helicopter and flight crew may be considered to be available for payment purposes

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SECTION G - CONTRACT ADMINISTRATION DATA

G.1 PAYMENT FOR FLIGHT

(1) Flight time will be computed in hours and tenths of hours as recorded by the collective activated hour meter on the Helicopter.

(2) Payment for flight time will be made only when properly ordered by persons designated to authorize such flights.

(3) The Government does not guarantee a minimum number of flying hours.

G.2 PAYMENT FOR AVAILABILITY

(1) Availability for the Helicopter and equipment as described in Section F, DAILY AVAILABILITY REQUIREMENTS (maximum 14 hours-single crew, 24 hours-double crew) will be ordered, measured and recorded each day. Periods of unavailability will be accumulated for the day and rounded up to the next full hour whenever the Contractor fails to comply with the requirements specified herein. Availability for the Helicopter and equipment will be reduced by 1/14 for each hour service is unavailable.

NOTE: The Daily Availability rate should be divisible by 14. Rates not divisible by the 14 hours will be rounded up to the next whole number divisible by 14 by the Government.

(2) Payment for availability will not commence until the aircraft and flight crew arrive at the designated base and are available for standby. On the first day, if an aircraft arrives at an incident before 1200 hours and meets the requirement of Section F, DAILY AVAILABILITY, the Contractor will be paid for a full day of availability. One-half the daily availability rate will be paid for aircraft that arrive after 1200 hours and are available for standby. On the last day of the incident, aircraft released from the incident/assignment before 1200 hours will be paid one-half (1/2) of the daily availability rate. Aircraft released after 1200 hours will be paid the full availability rate.

For purpose of this clause on the first and last day duty time will be computed based on time zone at point of departure.

(3) The daily availability rate shall include all fixed and variable costs (depreciation, salaries, overnight allowances, overhead, permanent shop facilities, etc.) incurred in providing continuous service exclusive of those costs directly attributed to actual flight.

G.3 PAYMENT FOR PROJECT WORK

(1) Aircraft services may be ordered for short periods of time (normally 1 day or less) to do project work as noted in C.1., SCOPE OF CONTRACT. When services are ordered under the Project Rate bid in the Schedule of Items, payment will be made for actual flight performed at the Project rate. A daily availability is not applicable. If the Project Rate is used and the project extends for more than 1 day and overnight (RON) costs are incurred, they will be reimbursed in accordance with the Federal Travel Regulations (FTR's).

(2) Project work may also be ordered and paid for using the Daily Availability Rate in the Schedule of Items plus the flight rate specified on the Flight Rate Table in Section J. If this method of payment is used, a RON fee is not applicable if the project extends for more than 1 (one) day.

(3) When doing project work under the CWN contract the payment method needs to be established prior to the start of the project and that rate should be used for the duration of the project.

G.4 REIMBURSEMENT FOR MOBILIZATION AND DEMOBILIZATION COSTS

(1) During mobilization and demobilization, on any day flight occurs and no daily availability is earned, \$400.00-per day mobilization/demobilization fee per authorized crew member plus flight time at the applicable flight rate specified on the Flight Rate Table in Section J will be paid.

NOTE: Maximum complement of authorized crew members for a Type II helicopter is three. The maximum complement for Type I helicopter is the actual number offered by the contractor, not to exceed **twelve (12)**.

(2) The Contractor will also be reimbursed vehicle mileage, telephone calls, truck permits at points-of-entry, landing and tie down fees. (Costs associated with preparing the aircraft for service will not be paid.)

(3) The costs shall be necessary and reasonable in amount. Claims for reimbursement shall be supported by itemized invoices if in excess of \$75.00 and shall be submitted to the designated payment office. Salary costs for Contractor employee(s) while in travel status is not a cost for which the Government will reimburse the Contractor.

(4) Failure to perform upon arrival at base of operation after mobilizing may result in non payment of all mobilization costs.

(5) When an aircraft is released from an incident, demobilization costs will be paid back to the original point of departure providing that is the immediate destination after release. Should the aircraft not immediately return to the original departure point, demobilization costs will only be paid as they actually occur.

(6) During Mobilization if cancellation occurs after flight has commenced, a cancellation fee will be paid in accordance with these provisions.

G.5 PAYMENT FOR EXTENDED STANDBY

Extended standby for the crew (that period over 9 hours per day, per crew member) will be measured in hours (rounded to the next full hour and paid at rate specified in the Schedule of Items) for all extended standby ORDERED by the Government and performed by the Contractor when the crew meets the standby requirement in accordance with Section F, DAILY AVAILABILITY REQUIREMENTS. Extended Standby is not intended to compensate the Contractor on a one-to-one basis for all hours necessary to service and maintain the aircraft. Extended standby must be specifically ordered by the Government and only in unusual circumstances that should be documented on the USDA-FS 6500-122 or USDI-OAS-23, will the Contractor be compensated for extended standby when the aircraft is not also available for immediate dispatch by the Government. Payment for extended standby is not applicable on days when payment for mobilization or demobilization is paid. Extended Standby is also not applicable to double flight crew.

G.6 PAYMENT FOR ADDITIONAL HELICOPTER AND PERSONNEL

When additional Helicopters or personnel are required by the Government, the Contractor may furnish them, if available. All terms and conditions of this contract will apply to their use except as set forth below:

(1) Flight or transportation from the point of dispatch and return will be paid at the applicable flight rate.

(2) Such aircraft will be released when the Government's need ceases to exist.

(3) The Government may order an additional Pilot or crew member on an intermittent basis to maximize usage of the Helicopter. The Pilot or crew member may be furnished at the option of the Contractor.

A lump sum payment of \$400 per day for travel days and work days as compensation for each additional crew member ordered will be paid. This does not apply to relief crews brought in by the Contractor on primary Pilot or crews mandatory days off. This compensation is only for additional crew members ordered by the Government.

G.7 ORDERING ADDITIONAL EQUIPMENT

When additional equipment listed in the Schedule of Items is ordered by the Government with the original aircraft order, the Contractor will be paid the daily rate specified in the schedule for each day the item is on site and available. Additional equipment not originally ordered with the aircraft that is made available on site will not be paid until ordered by the government.

G.8 TRANSPORTING OF RELIEF CREW

The reasonable cost of transporting a relief crew to and from the current Base of Operations of the Helicopter will be paid by the Government. Claims for reimbursement will be supported by itemized paid invoices and other documents necessary to verify incurred costs; i.e., itineraries supporting round trips, names of travelers, etc. This cost reimbursement is not applicable to primary crews. Salary costs for Contractor employee(s) while in travel status is not a cost for which the Government will reimburse the Contractor.

G.9 REIMBURSEMENT FOR AIRPORT USE COSTS

The Government will reimburse the Contractor for any airport use costs the Contractor is required to pay when ordered to operate from an airport other than the Base of Operations such as airport landing fees, tie-down charges, or other similar type costs supported by paid itemized invoices. (Invoice not required for charges under \$75.00)

G.10 MEALS

No charge will be made for meals furnished by the Government. .

G.11 PAYMENT FOR FUEL SERVICING VEHICLE AND MILEAGE

(1) A fuel servicing vehicle is required for all fire support use. At the Government's option, a fuel servicing vehicle may also be ordered for project work. The price of the vehicle is included in the daily availability rate bid for both fire and project use.

(2) Mileage for the fuel servicing vehicle, when dispatched by the Government, will be paid to and from the point of use from the Contractor's home base or such alternate location that the fuel servicing vehicle is stationed, whichever is closer, and while supporting the Helicopter, as follows:

(A) \$2.40 per mile - where the carrying capacity of aircraft fuel is 1,500 gallons or more.

(B) \$ 1.90 per mile - where the carrying capacity of aircraft fuel is at least 750 gallons, but less than 1,500 gallons.

(C) \$1.35 per mile - where the carrying capacity of aircraft fuel is at least 350 gallons, but less than 750 gallons.

(D) \$.90 per mile - where the carrying capacity of aircraft fuel is less than 350 gallons.

NOTE: Tanks must be compatible with the vehicle on which they are mounted. Tanks that will exceed the gross vehicle weight (gvw) when full will not be allowed. Truck must haul tank capacity except when inappropriate for the conditions.

G.12 PAYMENT FOR TRANSPORTATION OF HELICOPTER FUEL

(1) The Government will reimburse the Contractor for costs incurred in transportation of Helicopter fuel to sustain Government operations under the following conditions:

(A) When Contractor's fuel servicing vehicle cannot travel to an assigned Base of Operation due to lack of road access.

(B) When Contractor has to arrange for fuel support at an assigned Base of Operation to provide a supply for Helicopter flights until his/her fuel servicing vehicle arrives on site.

(2) The Contracting Officer will designate the method of transportation and the gallons to be transported.

(3) When air transportation is ordered, payment will be at the contract hourly flight rate.

(4) When transportation by commercial carrier is ordered, reimbursement will be made upon submission of copies of paid commercial carrier freight bills.

(5) In the event the Government elects to furnish fuel to the Contractor, the cost of fuel (based upon commercial rates at the nearest accessible point), will be charged. Such fuel costs will be deducted from any sums otherwise due the Contractor.

G.13 PAYMENT FOR RETARDANT CONCENTRATE

Payment for retardant concentrate furnished by the Contractor will be on an actual cost basis when accompanied by proper invoices.

G.14 MISCELLANEOUS COSTS TO THE CONTRACTOR

Miscellaneous unforeseeable costs not recovered through the contract payment rates and are the direct result of ordered service may be reimbursed at actual cost if approved by the Contracting Officer. Examples of this are truck permits at ports-of-entry when the service truck must cross State lines in fulfillment of ordered services or State taxes imposed at the time of entry into the State.

G.15 PAYMENT PROCEDURES**G.16 SERVICES ORDERED AND RECEIVED BY THE USDA-FOREST SERVICE**

(1) All flight time, daily availability, and other authorized expenses shall be recorded on USDA-Forest Service Form 6500-122, (Flight Use Report). At the end of each day, this form shall be completed and signed by the Government and the Contractor's Pilot. The 6500-122 may serve as the Contractor's invoice required by the Payments and Discounts for Prompt Payment Clauses.

(2) Payments will be made semi-monthly for service as shown on the approved form 6500-122 or contractor-furnished invoice (See Section I). Forms accumulated during the first half of the month will be processed for payment about the 16th day of the month and those accumulated during the last half of the month will be processed about the 1st day of the following month.

(3) All original FS-6500-122's should be submitted by the Contractor to:

USDA-FS BOISE NATIONAL FOREST
FISCAL & ACCOUNTING
1249 S VINNELL WAY
BOISE, ID 83709-1659

(4) Any questions concerning payment should be addressed to the Contracting Unit at NIFC, 208/387-5669.

G.17 SERVICES ORDERED AND RECEIVED BY THE DEPARTMENT OF INTERIOR

(1) An Aircraft Use Report, OAS-23 form shall be completed and signed by both the Contractor's representative and the Government. Instructions for proper completion of the Aircraft Use Report are contained in the OAS-23 booklet. At the election of the Contractor, the completed and signed Aircraft Use Reports may be used as the Contractor's invoice.

(2) The Contractor may submit invoices not less frequently than every two weeks beginning from the first day services begin or upon conclusion of a assignment. Services provided shall be itemized and shown on a daily basis

- (3) An OAS Contract Number will appear on all OAS-23 forms.
- (4) All completed OAS-23 forms will be submitted to:

OFFICE OF AIRCRAFT SERVICES
PO BOX 15428
BOISE ID 83715-5428

(5) Any questions regarding payment by the Department of Interior should be directed to Harlan Johnson at 208/387-5891 or Edie Stansbury at 208/387-5768.

G.18 FINAL PAYMENT

Upon completion of each use period, final payment will not be made until all Government furnished equipment has been returned and a Release from Contract form has been furnished.

G.19 HELICOPTER MANAGER AUTHORITIES

A Manager will be assigned to each Helicopter furnished. In addition to directing the work of the Helicopter, the Manager has the following contract administration duties and authority:

- (1) Order aircraft services as provided in the contract.
- (2) Secure compliance with all contract provisions and specifications, and issue Work Orders/Notices of Non-Compliance as needed.
- (3) Conduct investigations and prepare Statements of Findings when requested by the Contracting Officer.
- (4) Suspend operations pending the removal or reinstatement of unsatisfactory equipment or personnel by the Contracting Officer.
- (5) Approve temporary Helicopter and Pilot substitutions.
- (6) Initiate and sign correspondence and other contract administration documents over the title "Helicopter Manager."
- (7) Maintain daily diary of contract activities.
- (8) Record and agree to availability and flight times.
- (9) Approve authorized breaks (See Section F, DAILY AVAILABILITY REQUIREMENTS).
- (10) Review aircraft data card for passenger/Manager transport authorization, rapid refueling, left-seat operations and for Type I Helicopters, the elected duty schedule

G.20 HELICOPTER MANAGER PRE-USE TASKS

(1) The Helicopter Manager will complete the Helicopter and Fuel Service Truck pre-use checklist (see Section J).

G.21 Helicopter Manager Post Use Tasks

The helicopter manager will complete and submit the CWN Manager 's Assignment Closeout (See Section J).

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SECTION H – SPECIAL CONTRACT REQUIREMENTS

- H.1 SUPPLEMENTS FOR TYPE I AND TYPE II HELICOPTERS**
- H.2 FIXED SUPPRESSANT/TERARDANT DELIVERY TANK**
- H.3 FIXED SUPPRESSANT/RETARDANT WITH SELF-FILLING CAPABILITY**
- H.4 SUPPRESSANT/RETARDANT MIXING EQUIPMENT**
- H.5 REMOTE CARGO HOOK FOR LONG-LINE USE**
- H.6 CONTRACTOR-FURNISHED LONG-LINE**
- H.7 CONTRACTOR-FURNISHED SYNTHETIC ROPE LONG-LINE**
- H.8 LONG-LINE (VERTICAL REFERENCE) QUALIFIED PILOT**
- H.9 SUPPLEMENTS FOR TYPE II HELICOPTERS**
- H.10 RAPPEL CAPABILITY**
- H.11 RAPPEL CAPABILITY AVIONICS**
- H.12 WIRE CUTTERS**
- H.13 CLOSED CIRCUIT FUELING SYSTEM**
- H.14 IFR QUALIFIED AIRCRAFT AND PILOT**
- H.15 APPROVAL FOR OPERATION OF AIRCRAFT FROM LEFT CREW SEAT**
- H.16 PERFORMANCE BY GOVERNMENT FURNISHED PILOT**
- H.17 GPS DATA CONNECTOR**
- H.18 ADDITIONAL GPS ANTENNA**
- H.19 ALTERNATIVE VHF-FM TRANSCEIVER (FM-1) REQUIREMENTS**
- H.20 ALTERNATIVE INTERCOMMUNICATIONS SYSTEM (ICS) REQUIREMENTS**
- H.21 LOSS, DAMAGE, OR DESTRUCTION ADDED TO SECTION I**
- H.22 FUEL SERVICE VEHICLE VHF-**

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 SUPPLEMENTS FOR TYPE I AND TYPE II HELICOPTERS

Specifications for additional equipment identified by an "*" in Section B, Schedule of Items follow.

H.2. FIXED SUPPRESSANT/RETARDANT DELIVERY TANK - SUPPLEMENT TO SECTION C

This supplement amends Section C when the Contractor provides a fixed suppressant/retardant delivery tank. All provisions of Section C apply, except as amended. For Type I aircraft, the Interagency Airtanker Board Requirements will apply.

SECTION C, AIRCRAFT EQUIPMENT

GENERAL EQUIPMENT (STANDARD AND LIMITED USE)

Add:

(18) One externally mounted, baffled quick-disconnect (5 minutes) fixed retardant delivery tank that meets or exceeds the following specifications:

(A) Capacity commensurate with the maximum rated lifting capability of the helicopter equipped with the tank at sea level on a standard day. Further, the weight of the tank shall not exceed 12.5% of the weight of the water in the tank when it is filled to full capacity.

Each system shall be approved by the Contracting Officer prior to use.

(B) Door(s). The tank door(s) shall be designed such that:

1. The frontal area of the retardant column is minimized.
2. The door(s) does not appreciably deflect the retardant when fully opened.
3. The tank and doors shall be leak proof, i.e. ½ gallon in a 24 hour period.
4. The doors shall be closeable in flight if the aircraft is not capable of landing with the door(s) open without damaging the door(s).

(C) Venting. The tank shall be vented so that no more than 0.25 PSI negative pressure will be created in the tank head space during the fastest drop sequence.

The vents shall not leak during filling or normal flight maneuvers.

(D) Fill Port(s). The fill port shall be a 3" Kamlock® fitting (male) and shall be located on the right side of the aircraft.

The fill port must not leak or overflow during ground operations or during normal flight maneuvers.

The tank shall accept filling at a rate sufficient to allow the tank to be filled to capacity in no more than 1 minute.

(E) Controls.

1. The door open switch shall be the same switch that opens the water bucket, as described in Section C, SPECIAL PROJECT EQUIPMENT - FIRE SUPPRESSION.
2. When required, the tank close switch shall be the same switch that closes the water bucket, as described in Section C, SPECIAL PROJECT EQUIPMENT - FIRE SUPPRESSION.
3. All tanks must be equipped with an independently controlled and operated emergency dump system enabling the entire load to be dropped in less than 6 (six) seconds. This system shall use mechanical, pneumatic, or fluid pressure for operation.

Emergency systems operated by pneumatic or fluid pressure shall be isolated from the normal tank system pressure. Normal function or failure of the normal system shall not affect the emergency system pressure. Emergency systems dependent on normal operating aircraft or tank systems for initial charge shall have a pressure gauge or indicator readily visible to the crew. Emergency systems dependent on precharged bottles shall have a positive means of checking system charge during preflight.

The primary emergency dump control must be positioned within easy reach of the pilot and copilot while strapped in their respective seats. Electrically operated controls shall be wired direct to a source of power isolated from the normal aircraft electrical bus and protected by a fuse or circuit breaker of adequate capacity.

(F) Certifications. The aircraft will be certificated in the normal or transport category except when restricted operations are authorized by the Contracting Officer.

Weight and balance computations shall be made with the tank full, empty, and removed, showing the helicopter to remain within acceptable center of gravity limits at all times.

Sources of supply are:

Simplex Manufacturing
13340 NE Whitaker Way
Portland, OR 97320-1125

Isolar
P.O. Box 28
Gresham, OR 97030-0028

Sheetcraft
447 S. Ojai Street
Santa Paula, CA 93060-3745

Conair Aviation, Ltd.
Box 220
Abbotsford, BC Canada V2S 4N9

H.3 FIXED SUPPRESSANT/RETARDANT TANK WITH SELF-FILLING CAPABILITY - SUPPLEMENT TO SECTION C

This supplement amends Section C when the Contractor provides a fixed suppressant/retardant tank with self-filling capability. All provisions of Section C apply, except as amended. For Type I aircraft, the Interagency Airtanker Board requirements will apply.

(1) SECTION C, AIRCRAFT EQUIPMENT

GENERAL EQUIPMENT (STANDARD AND LIMITED USE)

Add:

(19) Fixed Suppressant/Retardant Tank with Self-Filling Capability.

A fixed retardant delivery tank with self-contained hover drafting system. As a minimum, each system shall meet the following requirements:

- (A) Fill time - 90 seconds
- (B) Built to Aviation Industry Standards
- (C) Shall not adversely effect any aircraft system
- (D) Capacity commensurate with the maximum rated lifting capability of the helicopter equipped with the tank and drafting system at sea level on a standard day. Further, the weight of the tank and drafting system shall not exceed 12.5 percent of the weight of the water in the tank when it is filled to full capacity.

Each system shall be approved by the Contracting Officer prior to use. A copy of approval criteria is available from the Contracting Officer.

NOTE: Contractor shall utilize retardants approved for helicopter use when ordered to do so by the Government. The following long- and short-term retardants are approved for use as indicated:

H.4 SUPPRESSANT/RETARDANT MIXING EQUIPMENT - SUPPLEMENT TO SECTION C

(1) SECTION C, AIRCRAFT EQUIPMENT

GENERAL EQUIPMENT (STANDARD AND LIMITED USE)

Add:

(20) Suppressant/retardant mixing equipment -

(A) Design Requirements.

1. Installation - The unit shall be designed for ease of installation and loading and shall not require any modifications to the helicopter. Modifications are defined as any change to the integrity of the structural components of the helicopter airframe, such as drilling holes in tubing or distorting the metal.

2. Containment - Any unit mounted inside the helicopter (other than those that have STC's or 337's) must have a containment vessel around the pumping and concentrate storage supply. The containment vessel must be able to hold 125 percent of the concentrate supply. The discharge hose and fittings must be able to withstand 150 PSI or two times the rated maximum pressure output of the pump, whichever is greater. The discharge hose that is inside the cabin must have a containment sleeve of clear hose to check for leaks.

3. Restraint The foam pumping unit containment vessel and concentrates must

be affixed to the helicopter in a means to prevent injury to any occupants. The design must meet the maximum inertia forces specified in FAR 23.561(b)(2).

4. **Routing of Hose** The hose used to carry the concentrate must be routed out the side of the helicopter away from the pilot. Hoses will be routed in a manner that will not interfere with flight controls.

5. **Breakaway Fittings** Any hose must have a disconnect that will pull away from the hose when the bucket is released. The disconnect must be close to the helicopter to keep the hose from beating against the helicopter. The disconnect must be able to hold the pressure of the line and be able to activate at 1/3 of the bucket empty weight.

6. **Compatibility of Materials** The materials used in construction of any foam dispensing unit shall be compatible with all foams. Materials shall be resistant to corrosion, erosion, etching, or softening. To evaluate the materials, submerge in foam concentrate for 96 hours then in a one and one-half (1½) percent solution for 96 hours. Material samples shall be measured, weighed and visually examined to insure that deterioration of the materials and the assembly does not occur with operational use. Unacceptable conditions may be, but are not limited to cracking, crazing, softening, joint separation, bulging, diminished wall thickness, glue or mastic breakdown, or defective fasteners, gaskets or fittings.

7. **Foam Quantity** Unit is to be of the optimum size compatible with the make and model helicopter. However, the unit shall carry a minimum of 5 (five) gallons of concentrate for each 100 gallons of bucket capacity. Downloading may be accomplished when desirable during operations.

8. **Power to Operate** Power source for the dispenser shall be obtained from the helicopter by installing a MS 3116F-12-3P, 3 pin connector on the cord to the unit pin A shall be +28 VDC and pin B for ground (this is the same plug used for the infrared imaging system). Electrical power required to operate the concentrate pump shall not be in excess of that normally available from the plug used as the source of power.

9. **Vibration** The unit must not cause undue vibration in the helicopter during operation or in flight. The unit shall be padded to keep from causing any single stress points on any parts not designed for such.

(B) **Operation Requirements**

1. Operation - The pilot must be able to operate the unit with a minimal level of attention. The system shall be automated to the point where the pilot has one control to operate. Once the control is set for flow rate there should be no further adjustment necessary to the unit.

2. Flow Rate - The system shall be capable of dispensing a variable amount of concentrate, in flight, to achieve a mixture ratio ranging from 0.1 to 1.0 percent by volume in 0.1 percent increments.

3. Concentrate Loading - Loading using (5) gallon containers is preferred. Bulk loading must be performed so such loading will avoid any spillage on the helicopter or come in contact with the helicopter. Servicing must be accomplished during normal refueling time for the helicopter and take no longer than the refueling operation. Loading operations are to be performed by Contractor personnel.

The following foam products are approved for use as indicated:

Ansul Silv-Ex .	.1-1 percent	Approved for ground tanker and helicopter bucket- Admin. Approved.
Fire-Trol FireFoam 103, and 104	.1-1 percent	Approved for ground tanker and helicopter bucket-Admin. Approved.
Fire-Trol FireFoam 103B Phos-Check WD 881	.1-1 percent	Approved for ground tanker and helicopter bucket and fixed tank helicopter. conditional Approval and Temporary Admin. Approval)
Angus for Expan S	.1-1 percent	Approved for ground tanker and helicopter bucket-Admin Approved.
Pyrocap B-136	.1-1 percent	Approved for ground tanker and helicopter bucket- Admin. Approved.
Fire Quench	.1-1 percent	Approved for ground tanker, helicopter bucket, and fixed tank helicopter-Admin. Approved.

NOTE: When transporting retardant or equipment containing retardant residue, Contractor shall take precautions to prevent retardant from coming in contact with the aircraft structure.

C. Potential commercial sources of foam dispensing equipment

1. Fire Trol, LLC
P. O. Box 21568
734 E Southern Pacific
Phoenix, AZ 85036-1568

2. Solutia, Inc.
810 E Main St
Ontario, CA 91761-1895
- 3 SEI Industries
406-5940 No. 6 Rd
Richmond, BC Canada V6V 1Z1
- 4 Field Support Services
2001 Flightway Dr
Chamblee, GA 30341-3336

Proposed equipment is to be approved by the Contracting Officer prior to any use under the contract. The listing of potential vendors above does not constitute Contracting Officer approval of any equipment they may furnish.

H.5 REMOTE CARGO HOOK FOR LONG-LINE USE-SUPPLEMENT TO SECTION C

This supplement amends Section C when the Contractor provides a remote cargo hook for long-line use.

(1) SECTION C, AIRCRAFT EQUIPMENT
GENERAL EQUIPMENT (STANDARD AND LIMITED)

Add:

(21) One remote cargo hook with release system complying with the following requirements:

(A) Remote hook with brush guard or cage and rated at no less than the primary hook capacity.

(B) The cargo hook and associated systems shall be completely disassembled, inspected, lubricated, if required, and subjected to a full-load operational check in all operating modes within six months prior to the first year of contract performance and again at a two year interval from the date of initial inspection.

The inspection and maintenance shall be accomplished in accordance with the hook manufacturers operating and maintenance instructions as supplemented by this requirement.

(C) The hook release shall be activated electrically by the bucket gate open/close switch.

H.6 CONTRACTOR-FURNISHED LONG-LINE SUPPLEMENT TO SECTION C

(1) SECTION C, AIRCRAFT EQUIPMENT GENERAL EQUIPMENT (STANDARD AND LIMITED USE)

Add:

(18) Contractor-furnished long-line must meet the following requirements:

(A) Rotation resistant wire rope with swaged fittings shall be rated to the safe working load in accordance with (one of the standards) applicable ANSI, ASME or OSHA Standards, FS-5100-500E.

(B) For Type II helicopters, the lengths of wire rope shall be readily adjustable from 50 to 150 feet. For Type I helicopters, the lengths of wire rope shall be a minimum of 100 feet.

(C) Fabrication and installation methods shall be in accordance with aircraft and ANSI Standards.

H.7. CONTRACTOR-FURNISHED SYNTHETIC ROPE LONG-LINE -- SUPPLEMENT TO SECTION C

SECTION C, AIRCRAFT EQUIPMENT GENERAL EQUIPMENT (STANDARD AND LIMITED USE)

Add:

Contractor-furnished synthetic rope long-line must meet the following requirements:

A factor of safety of seven shall be used for synthetic rope long-lines. Minimum rope diameter shall be ½-inch.

Synthetic rope long-line care, inspection and retirement standards can be found in Section J

Thimbles shall be rated to the safe working load and be heavy duty with a minimum factor of safety of 5. All other hardware shall be rated to the safe working load with an ultimate strength of seven times the working load in accordance with applicable ANSI, ASME or OSHA Standards.

For Type II helicopters, the lengths of rope shall be readily adjustable from 50 to 150 feet. For Type I helicopters, the lengths of rope shall be a minimum of 100 feet.

Thimble selection and splicing methods in the long-line assembly shall be in accordance with the rope manufacturer's recommendations. Fabrication methods shall be in accordance with aircraft and applicable ANSI, ASME, Cordage Institute, or OSHA standards.

The Contractor shall provide the synthetic rope long-line manufacturer's certification, which includes any applicable standards and test methods used, who did the splicing and statement that splice was in accordance with rope supplier's instructions as well as the material certification stating material type and lot number from the rope supplier. In addition, the contractor shall provide the Rope long-line manufacturer's inspection criteria.

NOTE: Aircraft external loads V_{NE} shall be observed when flying with long-lines. Synthetic long-lines shall be flown with sufficient weight to prevent adverse streamback.

H.8 LONG-LINE (VERTICAL REFERENCE) QUALIFIED PILOT - SUPPLEMENT TO SECTION C

(1) SECTION C, PERSONNEL SPECIFICATIONS PILOT EXPERIENCE REQUIREMENTS

Add:

(3) If the Contractor provides a long-line (vertical reference) qualified pilot, the pilot shall display evidence of experience in precision placement of external loads using long line equipment and vertical reference techniques. Pilots may be required to demonstrate this capability during an agency evaluation.

(4) Contractors seeking external load or vertical reference approval for aircraft and pilots shall be required to develop and maintain an Agency approved training program for External Load operations, with special emphasis on vertical reference maneuvers. See Attachment Sec. J

(5) Pilot having completed initial or recurrent company external load training shall be endorsed by their chief pilot prior to use, thereby certifying that pilot is current and proficient in external load and vertical reference operations and meets interagency standards.

(6) Vertical reference qualified pilots shall maintain proficiency in vertical reference or external load operations. If under contract for a period of 30

consecutive days and no vertical reference activity occurs the pilot shall be provided at agency expense a one hour proficiency flight.

(7) Aircraft active under this contract for less than a 30-day period shall maintain currency through the company program as outlined in (1) and (2) of this paragraph.

(8) Aircraft may be made unavailable for failure to maintain vertical reference proficiency.

H.9 SUPPLEMENTS FOR TYPE II HELICOPTERS ONLY

H.10 RAPPEL CAPABILITY - SUPPLEMENT TO SECTION C

This supplement amends the sections as listed when the Contractor provides rappel capability. All provisions of the contract apply except as amended.

(1) SECTION C, CERTIFICATION AND OPERATIONS-
GENERAL (STANDARD AND LIMITED USE)

Replace paragraph (2) with:

(2) Helicopters must be certified in normal or transport category. The Contracting Officer may authorize rappelling or cargo letdown operations. The Agency will consider the aircraft to be wholly governmental when performing such missions as rappelling or cargo letdown.

SECTION C, AIRCRAFT EQUIPMENT
SPECIAL PROJECT EQUIPMENT - RAPPELLING

Add the following sub-section:

(1) When rappel operations are required, a Forest Service, Washington Office approved rappelling anchor will be furnished by the Contractor at no cost. Anchor will be installed in accordance with instructions. Documents required to be furnished by the Contractor:

Advisory Circular 43.13-1a and 2a

Installation Instructions

NOTE: The Forest Service anchor approval process is currently in transition. Previously approved designs will have to come up to new standards. Contact MTDC (Keith Windell) at 406/329-3956 for up-to-date information. (See Section J, LIST OF ATTACHMENTS, APPROVAL FOR RAPPELLING ANCHORS USED IN USDA-FOREST SERVICE OPERATIONS).

(2) FAA-approved extended height landing gear.

(3) Single passenger steps at cabin exits. (Cross-tube mounted passenger steps are not acceptable).

(4) Rear seat cushions must be firmly attached to mountings (velcro-type attachment is not acceptable).

(1) SECTION C, PERSONNEL SPECIFICATIONS
PILOT EXPERIENCE REQUIREMENTS

Add:

(9) Rappelling Activities. Must meet the following requirements:

(A) Must be qualified and agency approved to perform long-line activities.

(B) Final approval for rappel operations will be based upon:

1. Demonstrated ability to pilot the helicopter during a series of training rappels/cargo letdown.

2. Demonstrated ability to coordinate with the rappel spotter.

(C) Attend rappel training (optional to participate on rappel or simulator). This training shall be conducted and documented by qualified spotter and include the following:

1. Briefing and familiarization on rappel anchor and hard points for the specific model.

2. Seating arrangement for rappellers and spotters.

3. Rappel cargo placement/location and deployment sequence and

method.

4. Exit procedures, sequences, and emergency procedures.

5. Briefing on model specific procedures.

(D) Upon meeting the above requirements, the pilot will be approved for helicopter rappel or cargo letdown as appropriate, by a qualified agency Helicopter pilot Inspector

H.11 RAPPEL CAPABILITY - SUPPLEMENT TO SECTION C

(1) SECTION C, AIRCRAFT AVIONICS

(4) Audio Control System

Replace paragraph (A) 2 with the following.

2. STANDARD CATEGORY. Three separate audio systems shall be provided for the pilot, observer/co-pilot, and spotter. Each system shall provide separate controls for selection of multiple receiver audio outputs and transmitter microphone/PTT audio inputs. Each system shall also provide separate controls for adjustment for both ICS and receiver audio output levels.

Replace paragraph (B) 2 with the following:

2. STANDARD CATEGORY. Three audio control systems shall be installed providing the pilot, observer/co-pilot, and spotter separate systems. The system shall be configured so that the pilot, observer/co-pilot, and spotter may each simultaneously select and utilize a different transmitter (or PA system when installed) via their respective microphone/PTT. Whenever a transmitter is selected, the companion receiver audio shall automatically be selected for the corresponding earphone. Transmitter sidetone audio shall be provided for the user as well as for cross monitoring via the corresponding receiver selection switch on the other control system.

Replace paragraph (C) 2 with the following.

2. STANDARD CATEGORY. Separate controls shall be provided for pilot, observer/co-pilot, and spotter to select audio from one or any combination of available receivers. The aft exit passenger positions shall monitor the receiver(s) as selected by the observer/co-pilot.

Replace paragraph (F) 2 with the following.

2 STANDARD CATEGORY Separate PTT switches shall be provided for radio transmitter and ICS microphone operations at the pilot/co-pilot, and spotter positions. The pilot's PTT switches shall be mounted on the cyclic control. The observer/co-pilot PTT switches shall be mounted on the cord to the earphone/microphone connector or utilize a foot switch-operated PTT system. In aircraft requiring two pilots the observer/co-pilot's PTT system may be on the cyclic control. The spotter's PTT switches shall be mounted on the cord to the earphone/microphone connector with the cord being sufficiently long enough to allow the spotter to reach aft cabin doors. The aft exit passenger position shall be equipped with an ICS PTT switch mounted on the cord to the earphone/microphone connector (two positions minimum).

Add to paragraph (3):

The hose shall be at least 50 feet in length.

Delete from paragraph (4):

- "a 100 mesh or finer screen"

Add to paragraph (4):

Wiggins fuel nozzle, compatible with the Hydraulic Research receiver. An adapter shall be provided to allow fueling of aircraft with standard fueling port. Tube-Alloy fuel nozzle and Carter 64018 Commercial Closed Circuit nozzles also approved. The specified equipment is available from:

Tube-Alloy Corp
PO Drawer 3016
Houma LA 70361-3016
504/876-2886

HR Textron
25200 W Rye Canyon Rd
Valencia CA 91355
805/259-4030

Wiggins Corp
5000 Triggs St
Los Angeles CA 90022
213/269-9181

Aeronautical Accessories Inc.
PO Box 3689
Bristol TN 37625-3689
615/538-5151

Carter Ground Fueling Co.
671 W. 17th St.
Costa Mesa, CA 92627

H.14 IFR QUALIFIED AIRCRAFT AND PILOT -SUPPLEMENT TO SECTION C

This supplement amends the sections as listed to provide IFR qualified aircraft and IFR qualified pilots. All provisions of the contract apply, except as amended.

In addition to the equipment herein specified, the aircraft will be equipped and certified for IFR flights.

(1) SECTION C, AIRCRAFT AVIONICS

(2) Communication systems:

Replace paragraph (B) with the following:

Two panel-mounted VHF-AM (VHF-1) aeronautical transceivers (VHF-1 & VHF-2),, operating in the frequency band of 118.000 to 135.975 MHZ, with a minimum of 720 channels in no greater than 25 kHz increments, and a minimum of 5 watts carrier output power.

NOTE: One (minimum) 760 channel VHF-AM aeronautical transceiver shall be required on January 1,2005

SECTION C, AIRCRAFT AVIONICS
Navigation systems:

Add:

Two VOR receivers with indicators.

Note: Each VOR system must be maintained, checked, and inspected under an FAA approved procedure, or operationally checked within the past 30 days and recorded in logbook. See 14 CFR 91.171 for precise requirements.

One localizer (LOC) receiver interfaced to the #1 VOR system.

One glideslope receiver interfaced to the #1 VOR system.

One marker beacon receiver with indicator

One DME system with indicator

One ADF receiver with indicator

A magnetic compass. The magnetic compass(s) must be placarded per 14 CFR 23.1547

**H.15 APPROVAL FOR OPERATION OF AIRCRAFT FROM LEFT CREW SEAT
(BELL HELICOPTERS)**

The left crew seat may be used for vertical reference external load operations provided the following requirements are met:

- (1) Federal Aviation Administration (FAA) approval to operate single pilot from left seat.
- (2) Required controls and instruments are installed during approved left seat operations.
- (3) Aircraft and pilot are within conformity with appropriate certificates.
- (4) Have an endorsement on Helicopter Data Card by Agency Inspector.

H.16 PERFORMANCE BY GOVERNMENT FURNISHED PILOT

(1) The following provisions shall apply to the performance of work under the contract, on an intermittent and short term basis, when the utilization of a qualified Government pilot is authorized by the Contractor. All other provisions not expressly changed herein continue to apply.

Qualified Government Pilots can operate Contractor aircraft on a case by case basis.

Government pilot operations will be in compliance with the U.S.D.A Forest Service FSM 5700 or Department of the Interior, Departmental Manual (DM), Parts 350-354 Aviation Management and Title 14, Part 91 of the CFR, including those portions that apply to civil aircraft except as noted in the agency manuals. It is not intended that Government pilots meet all requirements of C.22.

(2) Appropriate records to establish the qualifications and experience of the Government pilot will be furnished to the Contractor upon request.

(3) The Contractor may conduct check rides and/or training of Government pilots for familiarization in the Contractor's helicopters. The cost of check rides and flight training, if required, will be borne by the Government.

(4) Approval of a Government pilot to perform work under the contract rests solely with the Contractor.

(5) Add to Section I: LOSS, DAMAGE, OR DESTRUCTION. This clause is applicable to this contract when the Contractor authorizes performance by a Government pilot.

(6) The payment provisions of the contract remain unchanged.

H.17 GPS DATA CONNECTOR - SUPPLEMENT TO SECTION C

This Supplement amends Section C when the Contractor is required/provides a GPS data connector.

- (1) SECTION C, AIRCRAFT AVIONICS
- (3) NAVIGATIONAL SYSTEMS

Add

(D) One GPS data port connector. A GPS data port connector shall be installed for the purposes of external data retrieval by a GIS laptop computer. The connector shall be a DB-9F type D sub-connector, shall be wired for RS-232C serial format for laptop computers (pin 2-transmit data, pin 3-receive data, if applicable, and pin 5-ground) and shall be mounted in a location convenient to the observer.

H.18 ADDITIONAL GPS ANTENNA - SUPPLEMENT TO SECTION C

This Supplement amends Section C when the Contractor provides and additional GPS antenna.

SECTION C, ALL AIRCRAFT –
NAVIGATIONAL SYSTEMS

Add:

(E) The Contractor shall allow the Government to utilize a portable Trimble Pathfinder Professional XL GPS in the aircraft. In order to facilitate this requirement, the Contractor shall provide a low-profile GPS aviation antenna (Trimble p/n 16248-20, or equivalent) mounted atop the aircraft per the manufacturer's installation manual, with associated cable and type "N" female connector, terminated within the aircraft in a location convenient to the observer.

**H.19 ALTERNATIVE VHF-FM TRANSCEIVER (FM-1) SPECIFICATIONS -
SUPPLEMENT TO SECTION C**

Obsolete

**H20 ALTERNATIVE INTERCOMMUNICATIONS SYSTEM (ICS) REQUIREMENTS
(ALL PASSENGER POSITIONS) - SUPPLEMENT TO SECTION C**

This Supplement amends Section C when the Contractor is required/provides an alternative Intercommunications System.

SECTION C, ALL AIRCRAFT AVIONICS
- (5) Intercommunication System

Replace paragraph (B) with the following:

STANDARD CATEGORY An ICS system shall be provided for the pilot, observer/co-pilot, and all passenger positions. ICS audio shall mix with, but not mute, selected receiver audio. An ICS audio level control shall be provided for each position above. Adjustment of the ICS audio level at any position shall not effect the level at any other position. A "hot mic" capability, controlled via an activation switch or voice activation (VOX), shall be provided for the pilot and observer/co-pilot. ICS sidetone audio shall be provided for the earphone corresponding with the microphone in use.

H.21 LOSS, DAMAGE, OR DESTRUCTION ADDED TO SECTION I

I.25 LOSS, DAMAGE, OR DESTRUCTION

(a) [Applicable only with Government furnished pilot(s).] The Contractor shall indemnify and hold the Government harmless from any and all losses or damage to the aircraft furnished under this contract except as provided in (d) below. For the purpose of fulfilling his obligation under this clause, the Contractor shall procure and maintain during the term of this contract, and any extension thereof, hull insurance acceptable to the Contracting Officer. The Contractor's insurance coverage shall apply to pilots furnished by the Government to operate the aircraft. The parties named insured under the policies shall be the Contractor and the United States of America. The Contractor may request a list of Government pilots by name and qualification who are potential pilots.

(b) Prior to the commencement of work hereunder, the Contractor shall furnish the Contracting Officer a copy of the insurance policy or policies or a certificate of insurance issued by the underwriter(s) showing that the coverage required by this clause has been obtained.

(c) Each policy or certificate evidencing the insurance shall contain an endorsement that provides that the insurance company will notify the Contracting Officer 30 days prior to the effective date of any cancellation or termination of any policy or certificate or any modification of a policy or certificate that adversely affects the interest of the Government in such insurance. The notice shall be sent by registered mail and shall identify this contract, the name and address of the Contracting Office, the policy, and the insured.

(d) If the aircraft is damaged or destroyed while in the custody and control of the Government, the Government will reimburse the Contractor for the deductible (if any) stipulated in the insurance coverage as follows:

(1) In-Motion Accidents - Up to 5 percent of the current insured value of the aircraft stated in the policy.

(2) Not In-Motion Accidents - Up to \$250.00 per accident.
Such reimbursement shall not be made, however, for loss or damage to the aircraft resulting from (1) normal wear and tear, (2) negligence or fault in maintenance of the aircraft by the Contractor, or (3) defect in construction of the aircraft or a component thereof.

(e) If damage to the aircraft is established to be the fault of the Government, rental payments to the Contractor during the repair period will be made as set forth elsewhere in the contract. The Government may, at its option, make necessary repairs or return the aircraft to the Contractor for repair. In the event the aircraft is

lost, destroyed, or damaged so extensively as to be beyond repair, no rental payment will be made to the Contractor thereafter.

(f) Any failure to agree as to the responsibility of the Contractor under this clause shall, after a final finding and determination by the Contracting Officer, be considered a dispute within the meaning of the "Disputes" clause of this contract.

H.22 FUEL SERVICE VEHICLE VHF-FM REQUIREMENTS SUPPLEMENT TO SECTION C

This supplement amends section C when the Contractor is required/provides a land mobile VHF-FM radio in the fuel/service vehicle

SECTION C, FUEL SERVICING VEHICLE GENERAL

Add:

(10) One VHF-FM two-way land mobile radio, with a matched, broadband, externally-mounted antenna (Antenna Specialists ASP-7495, Maxrad MWB-5803, or equivalent), shall be installed in the fuel/service vehicle. The radio's operational frequency range shall include the band of 150 to 174 MHz. Wide –band (25 kHz bandwidth/5 kWz modulation) and narrow-band (12.5 kHz bandwidth/2.5 kHz modulation) channel spacing shall be selectable on each channel, with user-programmable (in the field) channels. The radio shall be frequency synthesized, selectable CTCSS 32 sub-audible tone capability, and shall develop a minimum of 30 watts carrier output power (boosting output power of portable units is permissible). Known acceptable land mobile radios: BK Radio EMH/GMH series with Smartmic; RELM APCO 25; Kenwood TK-760H*, and ICOM IC-F320* (dealer modifications required). Known acceptable portable radios: BK EPH/GPH series, Recal P25.

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 CONTRACT TERMS AND CONDITIONS -COMMERCIAL ITEMS (FAR 52.212- (Feb 2002)

(a) *Inspection/Acceptance.* The Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The Government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The Government may require repair or replacement of nonconforming supplies or reperformance of nonconforming services at no increase in contract price. The Government must exercise its post-acceptance rights-

(1) Within a reasonable time after the defect was discovered or should have been discovered; and

(2) Before any substantial change occurs in the condition of the item, unless the change is due to the defect in the item.

(b) *Assignment.* The Contractor or its assignee may assign its rights to receive payment due as a result of performance of this contract to a bank, trust company, or other financing institution, including any Federal lending agency in accordance with the Assignment of Claims Act (31 U.S.C. 3727). However, when a third party makes payment (e.g., use of the Government wide commercial purchase card), the Contractor may not assign its rights to receive payment under this contract.

(c) *Changes.* Changes in the terms and conditions of this contract may be made only by written agreement of the parties.

(d) *Disputes.* This contract is subject to the Contract Disputes Act of 1978, as amended (41 U.S.C. 601-613). Failure of the parties to this contract to reach agreement on any request for equitable adjustment, claim, appeal or action arising under or relating to this contract shall be a dispute to be resolved in accordance with the clause at FAR 52.233-1, Disputes, which is incorporated herein by reference. The Contractor shall proceed diligently with performance of this contract, pending final resolution of any dispute arising under the contract.

(e) *Definitions.* The clause at FAR 52.202-1, Definitions, is incorporated herein by reference.

(f) *Excusable delays.* The Contractor shall be liable for default unless nonperformance is caused by an occurrence beyond the reasonable control of the Contractor and without its fault or negligence such as, acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, fires, floods, epidemics, quarantine restrictions, strikes, unusually severe weather, and delays of common carriers. The Contractor shall notify the Contracting Officer in writing as soon as it is reasonably possible after the commencement of any excusable delay, setting forth the full particulars in connection therewith, shall remedy such occurrence with all reasonable dispatch, and shall promptly give written notice to the Contracting Officer of the cessation of such occurrence.

(g) *Invoice.*

(1) The Contractor shall submit an original invoice and three copies (or electronic invoice, if authorized) to the address designated in the contract to receive invoices. An invoice must include-

- (i) Name and address of the Contractor;
- (ii) Invoice date and number;
- (iii) Contract number, contract line item number and, if applicable, the order number;
- (iv) Description, quantity, unit of measure, unit price and extended price of the items delivered;
- (v) Shipping number and date of shipment, including the bill of lading number and weight of shipment if shipped on Government bill of lading;
- (vi) Terms of any discount for prompt payment offered;
- (vii) Name and address of official to whom payment is to be sent;
- (viii) Name, title, and phone number of person to notify in event of defective invoice; and
- (ix) Taxpayer Identification Number (TIN). The Contractor shall include its TIN on the invoice only if required elsewhere in this contract.
- (x) Electronic funds transfer (EFT) banking information.
 - (A) The Contractor shall include EFT banking information on the invoice only if required elsewhere in this contract.
 - (B) If EFT banking information is not required to be on the invoice, in order for the invoice to be a proper invoice, the Contractor shall have submitted correct EFT banking information in accordance with the applicable solicitation provision, contract clause (e.g., 52.232-33, Payment by Electronic Funds Transfer-Central Contractor Registration, or 52.232-34, Payment by Electronic Funds Transfer-Other Than Central Contractor Registration), or applicable agency procedures.
 - (C) EFT banking information is not required if the Government waived the requirement to pay by EFT.

(2) Invoices will be handled in accordance with the Prompt Payment Act (31 U.S.C. 3903) and Office of Management and Budget (OMB) prompt payment regulations at 5 CFR part 1315.

(h) *Patent indemnity.* The Contractor shall indemnify the Government and its officers, employees and agents against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any United States or foreign patent, trademark or copyright, arising out of the performance of this contract, provided the Contractor is reasonably notified of such claims and proceedings.

(i) *Payment.* Payment shall be made for items accepted by the Government that have been delivered to the delivery destinations set forth in this contract. The Government will make payment in accordance with the Prompt Payment Act (31 U.S.C. 3903) and OMB prompt payment regulations at 5 CFR part 1315. In connection with any discount offered for early payment, time shall be computed from the date of the invoice. For the purpose of computing the discount earned, payment shall be considered to have been made on the date which appears on the payment check or the specified payment date if an electronic funds transfer payment is made.

(j) *Risk of loss.* Unless the contract specifically provides otherwise, risk of loss or damage to the supplies provided under this contract shall remain with the Contractor until, and shall pass to the Government upon:

(1) Delivery of the supplies to a carrier, if transportation is f.o.b. origin; or

(2) Delivery of the supplies to the Government at the destination specified in the contract, if transportation is f.o.b. destination.

(k) *Taxes.* The contract price includes all applicable Federal, State, and local taxes and duties.

(l) *Termination for the Government's convenience.* The Government reserves the right to terminate this contract, or any part hereof, for its sole convenience. In the event of such termination, the Contractor shall immediately stop all work hereunder and shall immediately cause any and all of its suppliers and subcontractors to cease work. Subject to the terms of this contract, the Contractor shall be paid a percentage of the contract price reflecting the percentage of the work performed prior to the notice of termination, plus reasonable charges the Contractor can demonstrate to the satisfaction of the Government using its standard record keeping system, have resulted from the termination. The Contractor shall not be required to comply with the cost accounting standards or contract cost principles for this purpose. This paragraph does not give the Government any right to audit the Contractor's records. The Contractor shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

(m) *Termination for cause.* The Government may terminate this contract, or any part hereof, for cause in the event of any default by the Contractor, or if the Contractor fails to comply with any contract terms and conditions, or fails to provide the Government, upon request, with adequate assurances of future performance. In the event of termination for cause, the Government shall not be liable to the Contractor for any amount for supplies or services not accepted, and the Contractor shall be liable to the Government for any and all rights and remedies provided by law. If it is determined that the Government improperly terminated this contract for default, such termination shall be deemed a termination for convenience.

(n) *Title.* Unless specified elsewhere in this contract, title to items furnished under this contract shall pass to the Government upon acceptance, regardless of when or where the Government takes physical possession.

(o) *Warranty.* The Contractor warrants and implies that the items delivered hereunder are merchantable and fit for use for the particular purpose described in this contract.

(p) *Limitation of liability.* Except as otherwise provided by an express warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.

(q) *Other compliances.* The Contractor shall comply with all applicable Federal, State and local laws, executive orders, rules and regulations applicable to its performance under this contract.

(r) *Compliance with laws unique to Government contracts.* The Contractor agrees to comply with 31 U.S.C. 1352 relating to limitations on the use of appropriated funds to influence certain Federal contracts; 18 U.S.C. 431 relating to officials not to benefit; 40 U.S.C. 327, *et seq.*, Contract Work Hours and Safety Standards Act; 41 U.S.C. 51-58, Anti-Kickback Act of 1986; 41 U.S.C. 265 and 10 U.S.C. 2409 relating to whistleblower protections; 49 U.S.C. 40118, Fly American; and 41 U.S.C. 423 relating to procurement integrity.

(s) *Order of precedence.* Any inconsistencies in this solicitation or contract shall be resolved by giving precedence in the following order:

- (1) The schedule of supplies/services.
- (2) The Assignments, Disputes, Payments, Invoice, Other Compliances, and Compliance with Laws Unique to Government Contracts paragraphs of this clause.
- (3) The clause at 52.212-5.
- (4) Addenda to this solicitation or contract, including any license agreements for computer software.
- (5) Solicitation provisions if this is a solicitation.
- (6) Other paragraphs of this clause.
- (7) The Standard Form 1449.
- (8) Other documents, exhibits, and attachments.
- (9) The specification.

I.2 CONTRACT TERMS AND CONDITIONS REQUIRED TO IMPLEMENT STATUTES OR EXECUTIVE ORDERS -COMMERCIAL ITEMS (FAR 52.212-5) (DEC 2001)

(a) The Contractor shall comply with the following FAR clauses, which are incorporated in this contract by reference, to implement provisions of law or executive orders applicable to acquisitions of commercial items:

- (1) 52.222-3, Convict Labor (E.O. 11755).
- (2) 52.233-3, Protest after Award (31 U.S.C. 3553).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components:

[Contracting Officer must check as appropriate.]

- (1) 52.203-6, Restrictions on Subcontractor Sales to the Government, with Alternate I (41 U.S.C. 253g and 10 U.S.C. 2402).
- (2) 52.219-3, Notice of Total HUBZone Small Business Set-Aside (Jan 1999).
- (3) 52.219-4, Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer).
- (4)(i) 52.219-5, Very Small Business Set-Aside (Pub. L. 103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).
- (ii) Alternate I to 52.219-5.
- (iii) Alternate II to 52.219-5.
- (5) 52.219-8, Utilization of Small Business Concerns (15 U.S.C. 637 (d)(2) and (3)).
- (6) 52.219-9, Small Business Subcontracting Plan (15 U.S.C. 637(d)(4)).
- (7) 52.219-14, Limitations on Subcontracting (15 U.S.C. 637(a)(14)).
- (8)(i) 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).
- (ii) Alternate I of 52.219-23.
- (9) 52.219-25, Small Disadvantaged Business Participation Program-Disadvantaged Status and Reporting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (10) 52.219-26, Small Disadvantaged Business Participation Program-Incentive Subcontracting (Pub. L. 103-355, section 7102, and 10 U.S.C. 2323).
- (11) 52.222-21, Prohibition of Segregated Facilities (Feb 1999)
- (12) 52.222-26, Equal Opportunity (E.O. 11246).
- (13) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the

Vietnam Era, and Other Eligible Veterans (38 U.S.C. 4212)

- (14) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793).
- (15) 52.222-37, Employment Reports on Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (38 U.S.C. 4212).
- (16) 52.222-19, Child Labor-Cooperation with Authorities and Remedies (E.O. 13126).
- (17)(i) 52.223-9, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (42 U.S.C. 6962(c)(3)(A)(ii)).
- (ii) Alternate I of 52.223-9 (42 U.S.C. 6962(i)(2)(C)).
- (18) 52.225-1, Buy American Act-Balance of Payments Program-Supplies (41 U.S.C. 10a - 10d).
- (19)(i) 52.225-3, Buy American Act-North American Free Trade Agreement-Israeli Trade Act-Balance of Payments Program (41 U.S.C. 10a - 10d, 19 U.S.C. 3301 note, 19 U.S.C. 2112 note).
- (ii) Alternate I of 52.225-3.
- (iii) Alternate II of 52.225-3.
- (20) 52.225-5, Trade Agreements (19 U.S.C. 2501, *et seq.*, 19 U.S.C. 3301 note).
- (21) 52.225-13, Restriction on Certain Foreign Purchases (E.O. 12722, 12724, 13059, 13067, 13121, and 13129).
- (22) 52.225-15, Sanctioned European Union Country End Products (E.O. 12849).
- (23) 52.225-16, Sanctioned European Union Country Services (E.O. 12849).
- (24) 52.232-33, Payment by Electronic Funds Transfer-Central Contractor Registration (31 U.S.C. 3332).
- (25) 52.232-34, Payment by Electronic Funds Transfer-Other than Central Contractor Registration (31 U.S.C. 3332).
- (26) 52.232-36, Payment by Third Party (31 U.S.C. 3332).
- (27) 52.239-1, Privacy or Security Safeguards (5 U.S.C. 552a).
- (28)(i) 52.247-64, Preference for Privately Owned U.S.-Flag Commercial Vessels (46 U.S.C. 1241).
- (ii) Alternate I of 52.247-64.

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, which the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items or components:

[Contracting Officer check as appropriate.]

- (1) 52.222-41, Service Contract Act of 1965, As Amended (41 U.S.C. 351, *et seq.*).

- (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (29 U.S.C. 206 and 41 U.S.C. 351, *et seq.*).
- (3) 52.222-43, Fair Labor Standards Act and Service Contract Act-Price Adjustment (Multiple Year and Option Contracts) (29 U.S.C. 206 and 41 U.S.C. 351, *et seq.*).
- (4) 52.222-44, Fair Labor Standards Act and Service Contract Act-Price Adjustment (29 U.S.C. 206 and 41 U.S.C. 351, *et seq.*).
- (5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreement (CBA) (41 U.S.C. 351, *et seq.*).

(d) *Comptroller General Examination of Record.* The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records-Negotiation.

- (1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.
- (2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.
- (3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) or (d) of this clause, the Contractor is not required to include any FAR clause, other than those listed below (and as may be required by an addenda to this paragraph to establish the reasonableness of prices under Part 15), in a subcontract for commercial items or commercial components-

- (1) 52.222-26, Equal Opportunity (E.O. 11246);
- (2) 52.222-35, Equal Opportunity for Special Disabled Veterans, Veterans of the Vietnam Era, and Other Eligible Veterans (38 U.S.C. 4212);
- (3) 52.222-36, Affirmative Action for Workers with Disabilities (29 U.S.C. 793);

(4) 52.247-64, Preference for Privately-Owned U.S. Flag Commercial Vessels (46 U.S.C. 1241) (flow down not required for subcontracts awarded beginning May 1, 1996); and

(5) 52.222-41, Service Contract Act of 1965, As Amended (41 U.S.C. 351, *et seq.*).

I.3 ECONOMIC PRICE ADJUSTMENT -DAILY AVAILABILITY /SPECIFIED FLIGHT RATE CONTRACTS

(1) SPECIFIED AND OPTIONAL FLIGHT RATES (NON-FUEL PORTION), MANDATORY AVAILABILITY AND EXTENDED STANDBY RATES

Contract rates will be established in accordance with the following to reflect increases or decreases in the cost of Performance of the contract work. The increases or decreases used in establishing the rates will be those indicated by the changes in the following price indexes:

(A) The Non-Fuel Portion of the Specified Flight and Optional Flight Rates will be affected by:

TABLE 6-PRODUCER PRICE INDEXES

1. Commodity Group 1423 --Aircraft Engines and Engine Parts
2. Commodity Group 1425 --Aircraft Parts and Auxiliary Equipment

AVERAGE PERCENTAGE CHANGES X 100 PERCENT OF LAST ADJUSTED RATE

The new rate will be derived by multiplying the average of the percentage changes of (1) and (2) times the rate in effect for the year immediately prior to the year in which the renewal is effective. The result will be added to or subtracted from the existing rate to become the newly adjusted rate (rounded to the next dollar).

(B) The Mandatory Availability Rate will be affected by: (NOT APPLICABLE IN THIS CONTRACT.)

TABLE 5-PRODUCER PRICE INDEXES

Service Industry 4522 --Air Transportation, nonscheduled

ACTUAL PERCENT CHANGE X 75% OF LAST ADJUSTED RATE

The new Mandatory Availability Rate will be derived by multiplying the actual percent change in the index times 75% of the rate in effect for the year immediately prior to the year in which the renewal is effective. The remaining percent (25%) calculation will be adjusted in accordance with Fair Labor Standards Act and Service Contract Act --Price Adjustment (Multiple Year and Option Contracts) found in Section I. The results (75% and 25% adjustments) will be added to or subtracted from the contract rate to become the newly adjusted rate (rounded to the next dollar).

NOTE: WHEN THE CONTRACTOR DETERMINES THAT THE ECONOMIC ADJUSTMENT DOES NOT COVER AN INCREASE IN LABOR RATES AS A RESULT OF A NEW WAGE DETERMINATION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO DOCUMENT SUCH INCREASES AND REQUEST ANY APPROPRIATE ADJUSTMENTS. SUCH AN ADJUSTMENT WILL BE MADE IN ACCORDANCE WITH THE FAIR LABOR STANDARDS ACT AND SERVICE CONTRACT ACT -PRICE ADJUSTMENT (MULTIPLE YEAR AND OPTION CONTRACTS). ACTUAL PAYROLL SERVICE CONTRACT ACT CLAUSE FOUND IN SECTION I.

(C) Extended Standby Rate will be affected by:

The Extended Standby Rate will be reviewed periodically to insure compliance with the Service Contract Act and an adjustment will be made if necessary. In the event a substantial revision to the method of calculating an Index is used by the Bureau of Labor Statistics, US Department of Labor, or the index is discontinued, the Contracting Officer will select a comparable Index for use under the contract. The Index chosen will be either a current Index in use or a comparable Index prepared by the Bureau of Labor Statistics, US Department of Labor, prepared at the request of the Contracting Officer. Also, at any time the Bureau of Labor Statistics adds an index that is more appropriate or applicable to the contract, the Contracting Officer may elect to make substitution for an already existing Index. The newly adjusted rates will become effective annually on FEBRUARY 16 of each year. The basis for establishing the new rates will be the changes in the Index over the calendar year immediately prior to the year of the annual adjustment.

The newly adjusted rates will become effective annually on FEBRUARY 16 of each year. The basis for establishing the new rates will be the changes in the Index over the calendar year immediately prior to the year of the annual adjustment.

The change to the Index will be determined by computing the percent change from the last Index for the calendar year using the January thru December annual average Index unadjusted Index figures as they appear in the publication "Producer Price Indexes" Bureau of Labor Statistics, US Department of Labor.

Any increase will not exceed 15% of the rate being adjusted and the aggregate change over the life of the contract including renewals shall *not* exceed 30% of the initial contract rates.

(2) SPECIFIED "FLIGHT" AND "OPTIONAL RATES PORTION"

During the contract periods, including renewals, flight rates will be adjusted to reflect increases and decreases in the prices of aviation fuel.

The price of Jet fuel is established at \$2.32 per gallon. The price of 100 Octane fuel is established at \$2.49 per gallon. The unit prices are an average of the lowest unit price for aviation fuel Nationwide. Variations in unit prices used in determining flight rate adjustment amounts will be established by using the average of the lowest unit price for aviation fuel or 100 Octane, whichever is applicable, at the following locations:

- (i) MERCURY AVIATION (RENO AIR SERVICE), Fresno, CA
- (ii) CUTTER FL YING SERVICE, Albuquerque, NM
- (iii) CUTTER AVIATION, Phoenix, AZ
- (iv) FLIGHTCRAFT, Portland, OR
- (v) MILLIONAIRE, Salt Lake City, UT (Interwest Jet)
- (vi) WESTERN AIRCRAFT MAINTENANCE, Boise, ID
- (vii) MINUTEMAN AVIATION, Missoula, MT
- (viii) WEST STAR AVIATION, Grand Junction, CO
- (ix) MERCURY AVIATION (RENO AIR SERVICE), Reno, NV
- (x) WINGS OF WENATCHEE, Wenatchee, WA
- (xi) EPPS AVIATION, Atlanta, GA
- (xii) KNOXAIR, Alcoa, TN
- (xiii) TAC-AIR AVIATION, Ft. Smith, AR

The adjustment to the fuel portion of the flight rate will be the determined variation amount multiplied by the fuel consumption rates found in **Section J -- LIST OF ATTACHMENTS**, for the applicable aircraft type.

An initial adjustment to the fixed flight rate will be made on FEBRUARY 16 of each contract period. Subsequent adjustments will be made on APRIL 16, JULY 16, and OCTOBER 16 of each contract period provided variations in the average unit price, determined as stated above, is \$0.10 per gallon or more from the unit price established in the last previous adjustment made.

I.4 PROPERTY AND PERSONAL DAMAGE

- (1) The Contractor shall use every precaution necessary to prevent damage to public and private property.
- (2) The Contractor shall be responsible for all damage to property and to persons, including third parties, that occur as a result of his or his agent's or employee's fault or negligence. The term "third parties" is construed to include employees of the Government.
- (3) The Contractor shall procure and maintain during the term of this contract, and any extension thereof, aircraft and General Public liability insurance in accordance with 14 CFR 298. The parties named insured under the policy or policies shall be the **CONTRACTOR and THE UNITED STATES OF AMERICA.**
- (4) The Contractor may be otherwise insured by a combination of primary and excess policies. Such policies must have combined coverage equal to or greater than the combined minimums required.
- (5) Policies containing exclusions for chemical damage or damage incidental to the use of equipment and supplies furnished under this contract, or growing out of direct performance of the contract, will not be acceptable. The chemical damage coverage may be limited to chemicals dispensed while performing firefighting activities.
- (6) The Contractor, prior to the commencement of work, shall submit to the Contracting Officer one copy of the insurance policy, or confirmation from the insurance company, certifying that the coverage described in this clause has been obtained.

I.5 OPTION TO EXTEND THE TERM OF THE CONTRACT (FAR 52.217-9) (Mar 2000)

- (1) The Government may extend the term of this contract by written notice to the Contractor within 60 days; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 60 days before the contract expires. The preliminary notice does not commit the Government to an extension.
- (2) If the Government exercises this option, the extended contract shall be considered to include this option provision.
- (3) The total duration of this contract, including the exercise of any options under this clause, shall not exceed one (1) base year and two (2) renewal option periods.

I.6 STATEMENT OF EQUIVALENT RATES FOR FEDERAL HIRES (FAR 52.222-42) (MAY 1989)

In compliance with the Service Contract Act of 1965, as amended, and the regulations of the Secretary of Labor (29 CFR Par 4), this clause identifies the classes of service employees expected to be employed under the contract and states the wages and fringe benefits payable to each if they were employed by the contracting agency subject to the provisions of 5 U.S.C. 5341 or 5332.

THIS STATEMENT IS FOR INFORMATION ONLY: IT IS NOT A WAGE DETERMINATION.

Employee	Class	Monetary wage-- Fringe benefits
Aircraft Pilot	GS-12	\$35.19
Aircraft Co-pilot	GS-11	\$31.44
Aircraft Mechanic-Journeyman	GS-11	\$31.44
Aircraft Mechanic-Junior	GS-9	\$28.02
Aircraft Mechanic-Helper	GS-6	\$18.00
Aircraft Servicer	GS-6	\$18.00
Aircraft Laborer	GS-4	\$16.90

I.7 SUBCONTRACTING

By submission of an offer and execution of a contract, the Offeror/Contractor agrees to the following in performance of the contract:

- (1) At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.
- (2) The contract work will be performed using Contractor-owned or leased equipment, unless continuing performance is jeopardized due to circumstances beyond the control and without the fault or negligence of the Contractor.
- (3) Approval to subcontract must be requested from the Contracting Officer who must give expressed written consent to do so. Requests for approval of subcontracts are to be submitted to the Contracting Officer as soon as the need for a subcontract becomes apparent. Lease agreements that are in fact subcontract agreements will not be approved.
- (4) Approval to subcontract does not relieve the Contractor of responsibility for the performance of the contract work and compliance with contract terms and conditions.

**PART III - LIST OF DOCUMENTS, EXHIBITS,
AND OTHER ATTACHMENTS**

SECTION J - LIST OF ATTACHMENTS

J.1 LIST OF ATTACHMENTS (AGAR 452.252-70) (FEB 1988)

- J.2 Definitions of Contract Terms
- J.3 First Aid Kit
- J.4 Survival Kit
- J.5 Flight Use Report Instructions
- J.6 Flight Use Report (FS 6500-122)
- J.7 Aircraft Use Report (OAS-23)
- J.8 Helicopter Flight Rates, Fuel Consumption, and Weight Reduction Chart
- J.9 Wage Determination (lower 48 States)
- J.10 Wage Determination (other)
- J.11 Agency Guidelines for Vertical Reference Training
- J.12 Standard Interagency Load Calculation Instructions
- J.13 Standard Interagency Load Calculation Forms
- J.14 AUX-FM Radio
- J.15 9 Pin Helicopter Connector Variations
- J.16 Acceptable Paint Schemes
- J.17 Quality Control Procedures for Fueling
- J.18 Malfunction or Defect Report, FAA Form 8010-4
- J.19 Maintenance, Malfunction/Information Report
- J.20 Forest Service Grants of Exemption
- J.21 Avionics Operational Test STANDARDS (FS/OAS-24)
- J.22 Approval for Rappelling Anchors Used in Forest Service
- J.23 Alaska Supplement
- J.24 Aeronautical VFH-FM Radio Transceiver Specifications for USFS/USDOJ
As Helicopter Contract Use
- J.25 Aircraft Performance Questionnaire
- J.26 CWN Manager Assignment Close-Out
- J.27 Helicopter and Fuel Service Vehicle Pre-Use Checklist
- J.28 Helicopter Synthetic Long Line Guidelines
- J.29 Helicopter Make/Model/Series List

J.2 DEFINITIONS OF CONTRACT TERMS

As used throughout this contract, the following terms shall have the meaning set forth below:

- (1) ADD NOTE: Airworthiness directive.
- (2) ADDITIONAL CREW: An additional crew member is a crew member specifically ordered by the Government where it is to the Government's advantage to have additional availability of the aircraft (not to be confused with a relief crew furnished by Contractor to replace primary crew).
- (3) AIRCRAFT MAKE AND MODEL: A specific make and basic model of aircraft, including modification; e.g., a Bell 206 "A" is the same model as the Bell 206 "B."
- (4) AIRCRAFT MAKE, MODEL, AND SERIES: A specific make, model, and series of aircraft including modification (e.g., a Bell 206A is not the same make, model, and series as a Bell 206B).
- (5) AIRCRAFT TYPE:
 - (A) Limited Use Helicopter - A Helicopter Certificated in the restricted category or a Helicopter certificated in transport or normal category utilizing a reciprocating engine and any other Helicopter not operated and maintained in accordance with 14 CFR 135. These Helicopters may be used for limited operations such as tank and bucket operations and cargo.
 - (B) Standard Use Helicopter - A Turbine Powered Helicopter which is certificated in the normal or transport category, operated and maintained in accordance with 14 CFR 135 by an operator holding an Air Carrier Certificate. These Helicopters may be used for all types of operations such as passengers, reconnaissance, tank or bucket operations, and cargo.
 - (C) Type I Helicopter - No less than 16 seats (including pilot) or 5,000 lb card weight capacity, and 700 gallons retardant capacity.
 - (D) Type II Helicopter - 9 to 15 seats or 2,500 to 4,999 lbs card weight capacity and 300 to 699 gallons retardant capacity.
 - (E) Type III Helicopter - 5 to 8 seats or 1,200 to 2,499 lbs card weight capacity and 100 to 299 gallons retardant capacity.
 - (F) Type IV Helicopter- 3 to 4 seats or 600 to 1,199 lbs card weight capacity and 75 to 99 gallons retardant capacity.
- (6) ALTERNATE BASE: A base, other than the designated base, established to permit operation from immediate vicinity of a project area.

- (7) **ALERT STATUS:** a nonpaid status (after standby) subject to flight and duty limitations, in which the Contractor has 1 hour to return to standby if ordered by the Government to do so.
- (8) **ANCHOR:** Means of attaching the rope to an object. For heli-rappelling, the anchor would be the rappel plate or bracket. This would be the "fail-safe" attachment point for the rappel ropes.
- (9) **ATCO:** Air taxi/commercial operators holding a certificate issued by the Federal Aviation Administration.
- (10) **AUTHORIZED CREW MEMBER:** Those individuals specified in the SCHEDULE OF ITEMS unless designated otherwise by the Contracting Officer.
- (11) **AUTHORIZED FLIGHT OR FLYING TIME:** The actual time that a helicopter is off the ground for the purpose of the task or tasks to which assigned under a trip order when such time is recorded by the pilot and approved by a designated forest officer as having been properly performed.
- (12) **BASE OF OPERATIONS:** The location designated by the Contracting Officer from which ordered flight will originate.
- (13) **CARD WEIGHT:** The difference between the maximum certificated normal (internal) gross weight and the equipped weight of the aircraft (sea level, standard day).
- (14) **EQUIPPED WEIGHT:** Empty weight of the aircraft plus the weight of accessories required for the mission plus weight of oil.
- (15) **EXTENDED STANDBY:** Hours of standby ordered by the Government beyond the first 9 hours of standby required for which the Contractor is compensated at the specified rate found in the Schedule of Items. Extended standby is not intended to compensate the Contractor on a one-to-one basis for all hours necessary to service and maintain the aircraft nor is it paid while flight crew is in travel status to and from place of lodging.. Extended standby must be specifically ordered by the Government and only in unusual circumstances that should be documented on the USDA-FS 6500-122 or USDI-OAS-23, will the Contractor be compensated for extended standby when the aircraft is not also available for immediate dispatch by the Government.
- (16) **EXTERNAL LOAD:** A load that is carried or extends outside of the aircraft fuselage.
- (17) **FERRY FLIGHT:** Movement of helicopter under its own power from point-to-point.
- (18) **FLIGHT CREW:** Those Contractor personnel required by the Federal Aviation Administration to operate the aircraft safely while performing under contract to the Government.
- (19) **FLIGHT RATE:** The contract unit price per hour of flight time as found in the Table of Flight Rates or Schedule of Items. (Includes base cost plus fuel costs.)
- (A) **Base Cost:** The portion of the flight rate that is constant throughout the contract period and not affected by changes in fuel prices. Adjustments to the base cost will be made annually by the Contracting Officer.

(B) Fuel Cost: The variable portion of the flight rate that is subject to change due to fuel price change.

(20) FUEL ENDURANCE: Fuel required including a 30-minute reserve.

(21) FULLY OPERATIONAL: Helicopter, Pilots, other personnel, repairs, operating supplies, service facilities, and incidentals necessary to the operation of the helicopter both on the ground and in the air.

(22) FULLY RATED CAPACITY: The number of passenger seats or pounds of cargo load authorized in the applicable Type Certificate Data Sheet.

(23) HELITANKER: An aerial delivery system that is a helicopter configured for the dispensing of fire retardant or fire suppressant material. Airtanker Board criteria shall apply to helicopters with a minimum capacity of 700 gallons or more.

(24) HOVER CEILING:

(A) Hover-in-ground-effect (HIGE) - Maximum density altitude at which a helicopter can hover (at maximum gross weight) using the effects of ground cushion.

(B) Hover-out-of-ground Effect (HOGE) - Maximum density altitude at which a helicopter can hover (at maximum gross weight) without the effects of ground cushion.

(25) INTERNAL CARGO COMPARTMENTS: An area specifically designed to carry cargo and normally excludes tail boom, electrical compartments, etc.

(26) Standby: Personnel will be on standby during the hours stipulated each day by the Contracting Officer. The length of the standby period will be set by the Contracting Officer and may be adjusted from day to day. Standby requirements may be adjusted for project use. The first nine hours of standby will be considered the base or normal standby hours. During this time, the aircraft will be immediately available and able to be airborne within 10 minutes

(27) LAW ENFORCEMENT: Those duties carried out by USDA Forest Service personnel together with personnel from cooperating agencies, to enforce various Federal laws applicable to trespass (those activities relating to timber, grazing, fire, occupancy and others). Other activities can include those that are illegal under the antiquities acts and the manufacturing, production, and trafficking of substances in violation of the Controlled Substances Act (16 U.S.C. 559b-f)) and other illegal activities occurring on USDA-National Forest Jurisdictional lands. Specific law enforcement activities can include surveillance (visual, infrared, or photographic), transportation of law enforcement personnel and persons in custody and transportation of property (both internally and externally). All helicopter activities including landings will occur at locations that are secured by law enforcement personnel or are locations removed from law enforcement actions.

(28) NVG: Term used to identify night vision goggles and the operation associated with night vision goggles. (NVG equipped) (NVG qualified)

(29) PAYLOAD: The maximum allowable weight (passengers and/or cargo) that can be carried in any one mission.

(30) PASSENGER SEATING CAPACITY: Number of passenger seats excluding Pilot(s).

(31) RAPPPELLER: A person who has been trained and certified to rappel from a helicopter, in accordance with Agency specified policy and direction contained in the Interagency Helicopter Rappelling Guide.

(32) RAPPEL SPOTTER: A person who has been trained and certified, in accordance with Agency-specified policy and direction contained in the Interagency Helicopter Rappel guide, to direct and manage a rappel operation.

(33) RELIEF CREW: A relief crew is not required; however, aircraft will be considered unavailable for payment purposes if a relief crew is not provided. The Government will pay the reasonable cost of transporting a relief crew to and from the base of operation.

(34) SLING LOAD: Jettisonable external load that is lifted free of land or water during the rotorcraft operation.

(35) STC: Supplemental Type Certificate.

(36) VNE: Velocity never exceed.

(37) DUTY - That period that includes flight time, ground duty (pre- and post- flight inspections) of any kind, and standby or alert status at any location.

J.3 FIRST AID KIT - AERONAUTICAL

- (1) Each first aid kit must be in a dust-proof and moisture-proof metal or heavy plastic container.
- (2) The kit must be readily accessible to the Pilot and passengers.
- (3) The contents will include the following minimum items: (kits may be commercially available types which are FAA approved for the appropriate numbers of crew and passengers carried).

ITEM	Passenger Seats	
	0 - 9	10 - 50
Adhesive bandage strips, 3" long	8	16
Antiseptic or alcohol wipes (pkts)	10	20
Bandage compresses, 4"	2	4
Triangular bandage, 40" (sling)	2	4
Roller bandage, 4" x 5 yds (gauze)	2	4
Adhesive tape, 1"x 5 yds (std roll)	1	2
Bandage scissors	1	1
Body Fluids Barrier Kit:		
2 - pair latex gloves		
1- face shield		
1 - mouth-to-mouth barrier		
1 - protective gown		
2 - antiseptic towelettes		
1 - biohazard disposable bag	1	1

NOTE: Splints are recommended if space permits.

J.4 SURVIVAL KIT

All aircraft will carry survival equipment. Survival Kits will contain at least the following items and additional items required by local regulation and as appropriate for local climate and terrain conditions.

ITEMS

Knife

Signal Mirror

Signal Flares (6 each)

Matches (two small boxes in waterproof containers)

"Space" Blanket (1 each per occupant)

Water (one quart per occupant [not required when operating over areas with adequate drinking water])

Food (Two [2] days emergency rations per occupant)

Candles

Water purification tablets

Collapsible Water Bag

Whistle

Magnesium Fire Starter

Nylon rope or parachute cord (50 feet)

J.5 FLIGHT USE REPORT INSTRUCTIONS

The following instructions are to be adhered to in making distribution of Flight Use Report Forms (FS 6500-122 and OAS-23)

(1) ORIGINAL AND ONE COPY - give to Helicopter Pilot. Contractors are responsible for submitting originals to the following paying offices:

FS-6500-122

OAS-23

 USDA, Boise National Forest
 Attn: F&A
 1249 S Vinnell Way
 Boise, ID 83709-1684

 USDI, Office of Aircraft Services
 PO Box 15428
 Boise, ID 83715-5428

(2) ONE COPY - for the Helicopter Manager.

(3) Xerox copies for fire records maintained by Planning Section Chief Unit.

When the helicopter is released to ferry to another fire, and there will be a change in Helicopter Manager, the receiving fire will document the ferry time between fires. Coordination between fires shall be accomplished to prevent duplicate entries. Coordination can be accomplished by an appropriate note in the "Remarks" block of the Flight Use Report Form.

When the helicopter is released to ferry home, agree to an estimated ferry time with the Pilot and document the agreement in the "Remarks" block of the Flight Use Report Form. The Pilot can then show actual times when the ferry flight is completed. The paying office will verify the reasonableness of the time claimed.

Your assistance in legibly completing the Flight Use Report Forms with all required information is requested. As a part of the information to be supplied, the person signing the form on behalf of the Government, is to show the following information in the "Remarks" blocks of each form.

1. Printed name
2. Home Unit
3. Home Office telephone number (with area code)

BEFORE USING ANY HELICOPTER, THE HELICOPTER MANAGER SHALL DETERMINE THAT THE PILOTS AND AT LEAST ONE MECHANIC HAVE BEEN INSPECTED AND APPROVED AS EVIDENCED BY THE APPROVAL CARDS ISSUED FOR THIS PURPOSE.

J.6 FLIGHT USE REPORT (FS 6500-122)

1. INVOICE NUMBER 1607554		2. DATE OF FLIGHT / /		3. CONTRACT NUMBER - ITEM NO.		4. AC REGISTRATION #		5. VENDOR NAME									
6. LEG NUMBER	7. USER UNIT	8. USER CODE	9. PROJECT, FIRE, FLIGHT, OR RESOURCE ORDER NAME OR NUMBER	10. FAA IDENTIFIER FROM TO	11. MISSION CODE	12. PAY CODE	13. PILOT NAME(S)	14. PASSENGERS AND OTHER CREWMEMBERS	15. CARGO TYPE P, S, C, OR L	16. CARGO LBS.	17. RETARDANT F, M, S, OR L	18. RETARDANT GALLONS	19. METER TYPE	20. TIME OR METER READING START STOP	21. ELAPSED TIME HOURS AND HUNDRETHS	22. RATE	23. LEG TOTAL
1.																	
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

24. ACCOUNTING SUMMARY		25. REMARKS			
AFS FUND CODE	UNIT	MANAGEMENT CODE	FY	BUDGET OBJECT	AMOUNT
				2541	
				2541	
				2541	
				2541	
				2541	
				2541	

26. OVERNIGHT CHARGES	USER UNIT	MISSION CODE	PAY CODE	OR	LOCATION	NO. OF PEOPLE
27. SERVICE TRUCK CHARGES			ST		MILES	
28. OTHER CHARGES +			CH		DESCRIBE	
29. OTHER CREDITS -			CR		DESCRIBE	
30. EXCISE TAX			TX		PAY OR CREDIT OVER LEAFLES CERTIFICATED WEIGHT	
SUBTOTAL						
TOTAL OF ALL CHARGES						

33. NAME OF GOVERNMENT OFFICIAL (PLEASE PRINT) _____
 PHONE NUMBER _____

34. I CERTIFY THAT THE SERVICES LISTED ABOVE HAVE BEEN RECEIVED—SIGNATURE AND TITLE OF FOREST SERVICE OFFICIAL _____

35. I CERTIFY THAT THE SERVICES LISTED ABOVE HAVE BEEN PROVIDED—SIGNATURE AND TITLE OF VENDOR AGENT _____

USDA-FOREST SERVICE FLIGHT REPORT FS-6500-122 (04/95) PREVIOUS EDITION OF THIS FORM IS OBSOLETE

J.7 AIRCRAFT USE REPORT (OAS-23)

RED IS FOR OAS USE ONLY

RECEIVED DATE

492282

SERV. / AGMT. NO. / AC CONTROL NO.

AGENCY ORDER NO.

AIRCRAFT USE REPORT

U.S. DEPARTMENT OF THE INTERIOR
OFFICE OF AIRCRAFT SERVICES
PO BOX 15428
4827 AIRCRAFT DRIVE
BOISE ID 83727-15428
208-347-5781

PLEASE PRINT CLEARLY AS THIS FORM IS USED AS
AN INPUT DOCUMENT TO AN AUTOMATED SYSTEM

COMPANY NAME & ADDRESS

CONTRACT/BOA NO.

ITEM NO. AIRCRAFT MAKE & MODEL

PILOT NAME (PIC) Print

AGENCY DESIGNATED BASE (OPI/S)

AIRCRAFT FAA REGISTRATION NO.

PILOT NAME (2nd PIC) Print

HIRED (Date & Time)

RELEASED (Date & Time)

OTHER CREW MEMBER

TELEPHONE NO.	DATE			FAA IDENTIFIER		START	STOP	USED TIME (CO) QUANTITY	ITEM CODE	PAYLOAD	PILOT TIAL	BILLIE CODE	USE CODE	USER ORGANIZATION AND CHARGE CODES	SIGNED RECEIVED	TAX CODE
	M	D	Y	FROM	TO											
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Other Charges/Credits (AM attachments if necessary)

ORIGINAL-OAS COPY

AGENCY TELEPHONE NO. () FTS () COMM

AGENCY ADDRESS

Identify that the above record of services is correct and no payment has been received.

SIGNATURE OF CONTRACTOR/AGENT/PILOT

NAME (Print)

DATE

Identify that the above services are correct and no payment has been received.

SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

NAME (Print)

DATE

J.8 HOURLY FLIGHT RATES, FUEL CONSUMPTION, AND WEIGHT REDUCTION CHART

COMPANY	AIRCRAFT TYPE	FUEL CONSUMPTION (gal/hr)	April 15, 2003 HOURLY FLIGHT RATE	LOAD CALCULATION Weight Reduction (lbs)
AEROSPATIALE	SA-315B	58	\$1,076.00	180
	SA-316B	58	\$1,076.00	170
	SA-318C	56	\$1,019.00	80
	SA-319B	55	\$1,032.00	NOT ESTABLISHED
	AS-330J	179	\$2,607.00	N/A
	SA-332L-1	160	\$2,834.00	N/A
	SA-341G	56	\$1,001.00	170
	AS-350B	45	\$664.00	130
	AS-350B-1	46	\$665.00	160
	AS-350B-2	48	\$672.00	160
	AS-350B-3	50	\$706.00	175
	AS-350D	38	\$667.00	130
	AS-355F-1	58	\$830.00	140
	AS-355F-2	58	\$830.00	140
	AS-365N-1	87	\$1,372.00	275
	EC-135	64	\$866.00	220
BELL:	47/SOLOY	23	\$400.00	120
	204B (UH1 Series)	88	\$982.00	200
	205A-1	89	\$1,024.00	260
	UH-1B	88	\$982.00	N/A
	UH-1F	85	\$996.00	N/A
	TH-1L	88	\$1,004.00	N/A
	UH-1H	89	\$1,007.00	N/A
	206B-II	25	\$493.00	100
	206B-III	27	\$500.00	130
	206L-1	32	\$604.00	150
	206L-3	38	\$624.00	180
	206L-4	38	\$621.00	180
	212	100	\$1,163.00	390
	214B	160	\$1,595.00	380
	214ST	133	\$2,044.00	NOT ESTABLISHED
	222A	70	\$1,229.00	NOT ESTABLISHED
	222B	83	\$1,275.00	NOT ESTABLISHED
	222UT	83	\$1,250.00	NOT ESTABLISHED
	407	45	\$687.00	155
	412	110	\$1,330.00	OGE 390
	412HP	110	\$1,330.00	OGE 390
BOEING:	BV-107	180	\$2,606.00	N/A
	BV-234	405	\$4,650.00	N/A
HILLER:	*SL-3/4	21	\$405.00	90
	H-1100B	22	\$527.00	130
	UH-12/SOLO	23	\$457.00	100
KAMEN:	H43-F	85	\$1,077.00	N/A
	K-MAX	85	\$1,054.00	N/A
MBB:	BO105CBS	55	\$806.00	180
	BK-117	77	\$1,139.00	160
McDONNELL-	500C	23	\$525.00	110
DOUGLAS:	500D/E	28	\$529.00	120
	520N	32	\$553.00	100
	530F	34	\$599.00	120
	600N	41	\$657.00	155
	900/902	69	\$884.00	210
SIKORSKY:	S-55T	47	\$746.00	170
	S-58D/E	83	\$1,139.00	N/A
	S-58T/PT6T-3	115	\$1,425.00	OGE 000 IGE 400
	S-58T/PT6T-6	115	\$1,425.00	OGE 000 IGE 460
	CH 54/S 64	525	\$4,810.00	N/A
	S-61N	170	\$2,479.00	N/A
	S-62A	70	\$857.00	300
	S-70	160	\$2,246.00	N/A
AVERAGE GALLON PRICE:		JET FUEL	\$2.86	

J. 9 WAGE DETERMINATION LOWER 48

WAGE DETERMINATION FOR ADDITIONAL OCCUPATIONS WILL BE INCORPORATED BY REFERENCE AND WILL BE FURNISHED UNDER SEPARATE COVER BY REQUEST PENDING DEPARTMENT OF LABOR

REGISTER OF WAGE DETERMINATIONS UNDER THE SERVICE CONTRACT ACT By direction of the Secretary of Labor		Page 1 U.S. DEPARTMENT OF LABOR EMPLOYMENT STANDARDS ADMINISTRATION WAGE AND HOUR DIVISION WASHINGTON, D.C. 20210
		Wage Determination No.: 1995-0222 Revision No.: 12 Date of Last Revision: 09/04/2001
William W. Gross Director	Division of Wage Determinations	

Nationwide: Applicable in the continental U.S. Alaska and Hawaii.

** Fringe Benefits Required Follow the Occupational Listing **

Employed on U.S. Government contracts for aerial photographer, aerial seeding, aerial spraying, transportation of personnel and cargo, fire reconnaissance, administrative flying, fire detection, air taxi mail service, and other flying services.

OCCUPATION TITLE	MINIMUM WAGE RATE
Aerial Photographer	10.70
Airplane Pilot	21.45
First Officer (Co-Pilot)	19.52

EXCEPT SCHEDULED AIRLINE TRANSPORTATION AND LARGE MULTI-ENGINE AIRCRAFT SUCH AS THE B-727, DC-8, AND THE DC-9.

ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$2.02 an hour or \$80.80 a week or \$350.13 a month.

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 5 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

VACATION (Hawaii): 2 weeks paid vacation after 1 year of service with a contractor or successor; 3 weeks after 10 years, and 4 weeks after 15 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HEALTH & WELFARE (Hawaii): \$0.93 an hour for all employees on whose behalf the contractor provides health care benefits pursuant to the Hawaii prepaid Health Care Act. For those employees who are not receiving health care benefits mandated by the Hawaii prepaid Health Care Act, the new health and welfare benefit rate will be \$2.02. For information regarding the Hawaii prepaid Health Care Act, please contact the Hawaii Employers Council.

HAZARDOUS PAY DIFFERENTIAL: An 8 percent differential is applicable to employees employed in a position that represents a high degree of hazard when working with or in close proximity to ordnance, explosives, and incendiary materials. This includes work such as screening, blending, drying, mixing, and pressing of sensitive ordnance, explosives, and pyrotechnic compositions such as lead azide, black powder and photoflash powder. All dry-house activities involving propellants or explosives. Demilitarization, modification, renovation, demolition, and maintenance operations on sensitive ordnance, explosives and incendiary materials. All operations involving regrading and cleaning of artillery ranges.

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A 4 percent differential is applicable to employees employed in a position that represents a low degree of hazard when working with, or in close proximity to ordnance, (or employees possibly adjacent to) explosives and incendiary materials which involves potential injury such as laceration of hands, face, or arms of the employee engaged in the operation, irritation of the skin, minor burns and the like; minimal damage to immediate or adjacent work area or equipment being used. All operations involving, unloading, storage, and hauling of ordnance, explosive, and incendiary ordnance material other than small arms ammunition. These differentials are only applicable to work that has been specifically designated by the agency for ordnance, explosives, and incendiary material differential pay.

**** UNIFORM ALLOWANCE ****

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

**** NOTES APPLYING TO THIS WAGE DETERMINATION ****

Source of Occupational Title and Descriptions:

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations," Fourth Edition, January 1993, as amended by the Third Supplement, dated March 1997, unless otherwise indicated. This publication may be obtained from the Superintendent of Documents, at 202-783-3238, or by writing to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Copies of specific job descriptions may also be obtained from the appropriate contracting officer.

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND WAGE RATE (Standard Form 1444 (SF 1444))

Conformance Process:

The contracting officer shall require that any class of service employee which is not listed herein and which is to be employed under the contract (i.e., the work to be performed is not performed by any classification listed in the wage determination), be classified by the contractor so as to provide a reasonable relationship (i.e., appropriate level of skill comparison) between such unlisted classifications and the classifications listed in the wage determination. Such conformed classes of employees shall be paid the monetary wages and furnished the fringe benefits as are determined. Such conforming process shall be initiated by the contractor prior to the performance of contract work by such unlisted class(es) of employees. The conformed classification, wage rate, and/or fringe benefits shall be retroactive to the commencement date of the contract. {See Section 4.6 (C)(vi)} When multiple wage determinations are included in a contract, a separate SF 1444 should be prepared for each wage determination to which a class(es) is to be conformed.

The process for preparing a conformance request is as follows:

- 1) When preparing the bid, the contractor identifies the need for a conformed occupation(s) and computes a proposed rate(s).
- 2) After contract award, the contractor prepares a written report listing in order proposed classification title(s), a Federal grade equivalency (FGE) for each proposed classification(s), job description(s), and rationale for proposed wage rate(s), including information regarding the agreement or disagreement of the authorized representative of the employees involved, or where there is no authorized representative, the employees

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themselves. This report should be submitted to the contracting officer no later than 30 days after such unlisted class(es) of employees performs any contract work.

3) The contracting officer reviews the proposed action and promptly submits a report of the action, together with the agency's recommendations and pertinent information including the position of the contractor and the employees, to the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, for review. (See section 4.6(b)(2) of Regulations 29 CFR Part 4).

4) Within 30 days of receipt, the Wage and Hour Division approves, modifies, or disapproves the action via transmittal to the agency contracting officer, or notifies the contracting officer that additional time will be required to process the request.

5) The contracting officer transmits the Wage and Hour decision to the contractor.

6) The contractor informs the affected employees.

Information required by the Regulations must be submitted on SF 1444 or bond paper.

When preparing a conformance request, the "Service Contract Act Directory of Occupations" (the Directory) should be used to compare job definitions to insure that duties requested are not performed by a classification already listed in the wage determination. Remember, it is not the job title, but the required tasks that determine whether a class is included in an established wage determination. Conformances may not be used to artificially split, combine, or subdivide classifications listed in the wage determination.

**** OCCUPATIONS NOT INCLUDED IN THE SCA DIRECTORY OF OCCUPATIONS ****

Aerial Photographer

The aerial photographer must be skilled in reading flight maps, capable of assisting the pilot to adhere to flight lines, be able to level and operate a cartographic camera and its auxiliary equipment mounted in the aircraft so that the photographs that are taken will have the required forward lap and side lap for use in photogrammetric mapping equipment, and possess a working knowledge of aerial films and camera filters to insure proper exposure of the films.

First Officer (Co-Pilot)

Is second in command of commercial airplane and its crew while transporting passengers, mail, or other cargo on scheduled or nonscheduled flights. Assists or relieves an airline captain in operating the controls of an airplane; monitoring flight and engine instruments; and maintaining air-to-ground communications.

J.10 WAGE DETERMINATION - OTHER

WAGE DETERMINATION FOR ADDITIONAL OCCUPATIONS WILL BE INCORPORATED BY REFERENCE AND WILL BE FURNISHED UNDER SEPARATE COVER BY REQUEST PENDING DEPARTMENT OF LABOR APPROVAL

J.11 AGENCY GUIDELINES FOR VERTICAL REFERENCE TRAINING STANDARDS

The National Interagency Helicopter standards require that contractors develop a Vertical Reference/ External Load training syllabus and that contract pilots receive this training before applying for Agency Special use approval. The applicant must have a minimum of 10 hours Vertical Reference flight training during initial qualification, and a minimum of 2 hours annual recurrent training prior to use under the contract. The contract pilot must have a current proficiency endorsement from the company's chief pilot in order to qualify for an flight evaluation check by a Interagency Helicopter Inspector Pilot. The applicant must be able to:

- _____ a. Exhibit knowledge by explaining the elements of external load operations.
- _____ b. Perform a thorough preflight briefing of ground personnel to include hookup procedures, signals, Pilot and ground personnel actions in the event of an emergency or hook malfunction.
- _____ c. Visually determine that the cargo hook(s) and cables are installed properly and that electrical and manual releases are functioning properly.
- _____ d. Ascend vertically using vertical reference techniques while centered over the load until the load clears the ground, then maintain a stable hover with a load 10 feet (+ or - 5 feet) above the ground for 30 seconds.
- _____ e. Control the hook movement and stop load oscillations while in a hover.
- _____ f. Maintain positive control of the load throughout the flight while maintaining specified altitude within 50 feet, airspeed within 10 knots and heading within 10 degrees.
- _____ g. Maintains the proper approach angle and rate of closure to establish an out-of-ground effect hover with the load 10 feet above the ground (+ or -5 feet) for 30 seconds. The load will then be placed within a 10- foot radius of the specified release/touchdown point.
- _____ h . Maintains the proper approach angle and rate of closure to establish an out-of-ground effect hover **within a confined area** with the load 10 feet above the ground (+ or - 5 feet) for 30 seconds. The load will then be placed within a 10 foot radius of the specified release/touchdown point.

PLEASE PRINT

I certify that _____meets the currency and performance
(Applicant's Name)

requirements of _____ Vertical Reference/External Load
(Company Name)

Training Manual and recommend Him/Her for flight evaluation.

Chief Pilot (Signature of Chief Pilot) (Date)

J.12 STANDARD INTERAGENCY LOAD CALCULATION INSTRUCTIONS

(1) **PURPOSE.** The purpose is to ensure that the aircraft is capable of carrying a specified load to an identified elevation at a given density altitude.

(2) **APPLICABILITY.** This form is required to be completed daily for all helicopter flights prior to the start of operations. A minimum of one calculation must be made, with subsequent loads manifested. Additional calculations may be required as conditions change.

Form HCM-11, Single Helicopter Load Capability Planning Summary-Multiple Helispot and Fuel Loads, may be used to summarize load calculation information and plan flights. However, data for altitudes, temperatures, and fuel weights indicated on form HCM-11 must be supported by load calculations completed off the appropriate chart(s).

(3) RESPONSIBILITY AND INSTRUCTIONS FOR COMPLETION.

For USDI agencies, the Pilot is required to complete Blocks 1-13. For USDA-FS, the Pilot is required to complete Blocks 1-11.

The Pilot must utilize the applicable charts in the aircraft flight manual, referencing them each time a load calculation is initiated. The Helicopter Manager is responsible for ensuring that the Pilot does this.

The Pilot signs after the Helicopter Manager has completed the remainder of the form.

One copy is always left on the ground at takeoff site, or, if no one is at the takeoff site, the flight following facility must be informed of personnel on board (the form must still be completed).

Starting and ending Hobbs Meter readings should be entered on the form for later completion of the Agency flight payment document, as well as other reports.

J 13 STANDARD INTERAGENCY LOAD CALCULATION FORMS

GENERAL INSTRUCTIONS

Complete a load calculation for all flights--contracts, "offers," or military. For repetitive flights, one calculation is valid between like points of similar elevation as long as loads do not exceed that authorized by the calculation for the initial flight, and weather conditions do not change.

SPECIFIC INSTRUCTIONS

Item

1-11. Pilot completes Item 1 through 11; Helicopter Foreman or Officer in charge completes the balance of the form.

1. **PRESSURE ALTITUDE**--Read altimeter when set to 29.92.
2. **PRESSURE ALTITUDE**--Use MSL/Elevation until available.
3. **HELICOPTER EQUIPPED WEIGHT**--Empty weight of A/C (Obtained from pilot) + weight of accessories required for mission + weight of oil.
4. **FLIGHT CREW WEIGHT**--Weight of pilot (and any additional crew members) + his/her (their) personal gear.
5. **FUEL**--AvGas = 6.0 lbs./gal. Jet Fuel (JP) - 7 lbs./gal.
7. **COMPUTED GROSS WEIGHT**--Obtain weight from A/C Hover in Ground Effect (HIGE) Chart using pressure altitude and temperature. Sling load missions and adverse terrain or adverse weather, etc. flights will be computed from A/C Hover Out of Ground Effect (HOGE) Charts. (Use external load charts and/or external load limits.)
8. **WEIGHT REDUCTION**--Enter applicable weight reduction for helicopter mission as shown on Weight Reduction Chart.
10. **TAKE-OFF AND LANDING LIMITS**--Enter applicable Take-Off and Landing Weight Limit as found in LIMITATIONS section of Handbook.
11. **SELECTED WEIGHT**--If line 9 is greater than line 10, line 9 may be used for JETTISONABLE loads. However, the lowest weight, line 9 or 10, will be used for NON-JETTISONABLE loads.
13. **ALLOWABLE LOAD**--The maximum allowable weight (passenger and/or cargo) that can be carried for the mission.
14. **PASSENGERS AND/OR CARGO**--Enter passenger weights and/or type and weights of cargo. Manifest all passengers by name for each flight.
15. **ACTUAL PAYLOAD**--Total of all weights listed in Item 14.
16. **ACTUAL GROSS WEIGHT**--The total of weights in Items 12 and 15.

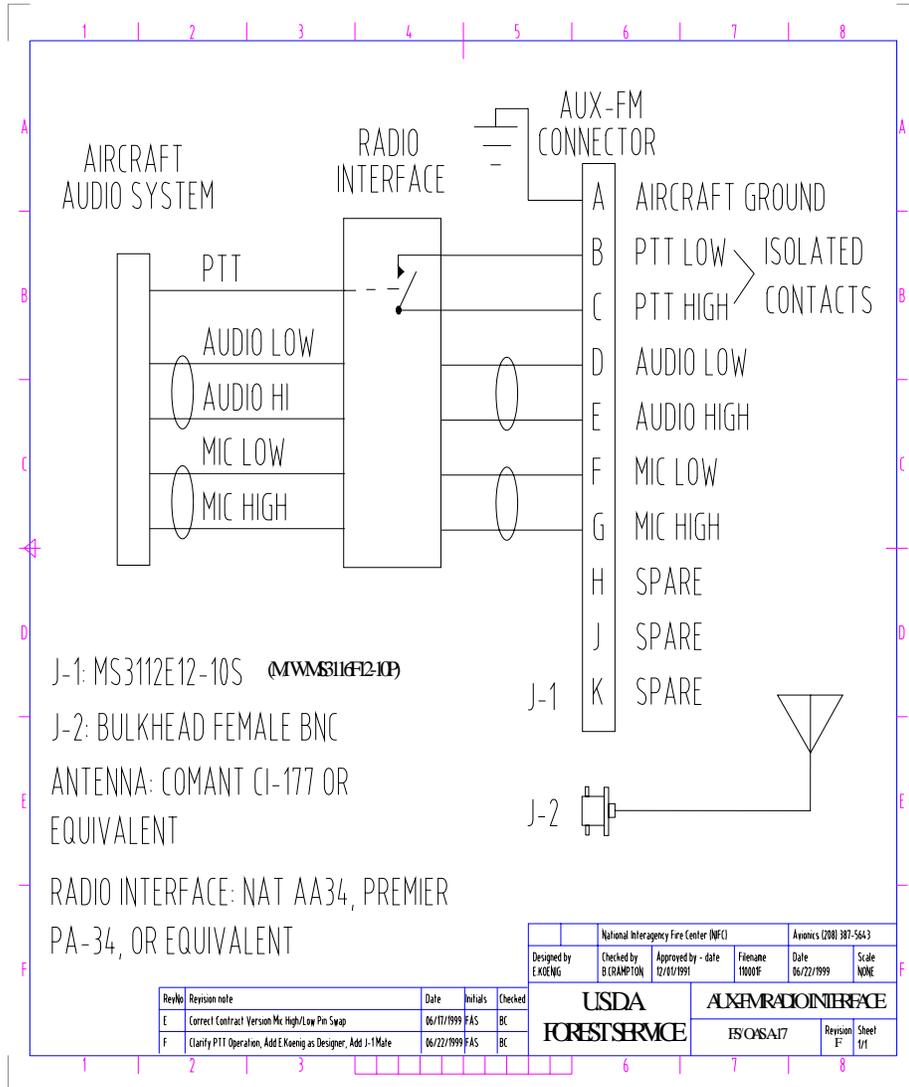
WEIGHT REDUCTION CHART

Model	Weight	Model	Weight	Model	Weight
AS-350B	130	206B-II	100	S-55T	170
AS-350D	130	206B-III	130	S-58T	
SA-315B	180	206L-1	150	W/PT6T-3	400
SA-316B	170	212	390	W/PT6T-6	460
SA-318C	80	214B-1	380	UH-1B	200
SA-319B	210	UH-12E	90	UH-1C	200
47G-3B	90	UH-12J3	100	UH-1E	200
47G-3B-1	90	FH-1100	100	UH-1F	200
47G-3B-2	90	H-500C	110	UH-1H	260
47G-Turbine	120	H-500D	120	UH-1M	200
204B	200	BO-105C		OH-58A	100
205A-1	260	W/250-C20	150	OH-58C	130
		W/250-C20B	180	OH-58C	

USDA-FOREST SERVICE HELICOPTER LOAD CALCULATION (Ref. FSH 5709.12)			HELICOPTER NO. & MODEL	
PILOT			DATE	
PROJECT			TIME	
1a. DEPARTURE BASE	1b. PRESSURE ALT.	1c. TEMPERATURE		
2a. DESTINATION	2b. PRESSURE ALT.	2c. TEMPERATURE		
3. HELICOPTER EQUIPPED WEIGHT				
4. FLIGHT CREW WEIGHT				
5. FUEL (Gal. _____ x _____ /lbs.)				
6. OPERATING WEIGHT (3 + 4 + 5)				
			HIGE	HOGE
7. COMPUTED GROSS WEIGHT				
8. WEIGHT REDUCTION				
9. ADJUSTED WEIGHT (7 minus 8)				
10. TAKEOFF AND LANDING LIMITS (Handbook, Limitation Section)				
NOTE: USE LOWEST WEIGHT (9 or 10) FOR NONJETTISONABLE LOADS.				
11. SELECTED WEIGHT (From 9 or 10)				
12. OPERATING WEIGHT (Line 6)				
13. ALLOWABLE PAYLOAD (11 minus 12)				
14. PASSENGERS AND/OR CARGO:				
15. ACTUAL PAYLOAD				
16. ACTUAL GROSS WEIGHT (12 plus 15) (Must not exceed 11)				
HELICOPTER FOREMAN (Signature)				
PILOT (Signature)				

FSH 5709.12-2-83

J.14 AVIONICS DRAWING (Auxiliary FM Radio Interface)



J-1: MS3112E12-10S (MWM8116F12-10)

J-2: BULKHEAD FEMALE BNC

ANTENNA: COMANT CI-177 OR EQUIVALENT

RADIO INTERFACE: NAT AA34, PREMIER

PA-34, OR EQUIVALENT

National Interagency Fire Center (NIFC)			Avionics (200) 387-5643		
Designed by E.KOENIG	Checked by B.CRAMPION	Approved by - date 12/01/1991	Filename 11001F	Date 06/22/1999	Scale NONE
USDA FOREST SERVICE			AUX FM RADIO INTERFACE		
			IS/OSA/17	Revision E	Sheet 1/1

Rev/No	Revision note	Date	Initials	Checked
E	Correct Contract Version Mic High/Low Pin Swap	06/11/1999	FAS	BC
F	Clarify PTT Operation, Add E.Koenig as Designer, Add J-1 Male	06/22/1999	FAS	BC

J.15 9 pin helicopter variations

9 PIN HELICOPTER VARIATIONS			#6. For Brackett Carousel & Chadwick Bucket (3 Wire Type). For additional information see FS/OASE-3																						
<p>#1. For Remote Hook, Bambi Bucket, Simplex Helitorch, and Seeders (2wire Type). For additional information see FS/OASE-2</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th></th> </tr> </thead> <tbody> <tr> <td>D</td> <td>Aircraft Ground</td> <td></td> </tr> <tr> <td>E</td> <td>+28 VDC (Bucket/Hook Open & Torch/Seeder On)</td> <td></td> </tr> </tbody> </table>			Pin	Function		D	Aircraft Ground		E	+28 VDC (Bucket/Hook Open & Torch/Seeder On)		<table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>C</td> <td>+28 VDC Reset/Bucket Close</td> </tr> <tr> <td>D</td> <td>Aircraft Ground</td> </tr> <tr> <td>E</td> <td>+28 VDC Hook/Bucket (Open)</td> </tr> </tbody> </table>		Pin	Function	C	+28 VDC Reset/Bucket Close	D	Aircraft Ground	E	+28 VDC Hook/Bucket (Open)				
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<p>#2 For Griffith Bucket (7 Wire Type). For additional information see FS/OASE-7</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Bucket Wire Color</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>Up Limit Relay Coil</td> <td>Green #16</td> </tr> <tr> <td>B</td> <td>Up Switch</td> <td>White #16</td> </tr> <tr> <td>F</td> <td>+28 VDC/ Ground (Up)</td> <td>White #12</td> </tr> <tr> <td>G</td> <td>Down Limit Relay Coil</td> <td>Red #16</td> </tr> <tr> <td>H</td> <td>Ground +28 VDC (Down)</td> <td>Black #12</td> </tr> <tr> <td>I</td> <td>Down Switch</td> <td>Black #16</td> </tr> </tbody> </table>			Pin	Function	Bucket Wire Color	A	Up Limit Relay Coil	Green #16	B	Up Switch	White #16	F	+28 VDC/ Ground (Up)	White #12	G	Down Limit Relay Coil	Red #16	H	Ground +28 VDC (Down)	Black #12	I	Down Switch	Black #16	<p>PARTS FOR CONNECTORS 1 THROUGH 6</p> <p>Connector on Helicopter (In-Line) MS3101E24-11S Or (Bulkhead) MS3102E24-11S Mating Connector MS3107B24-11P Dust Cap for Helo Connector (Optional) MS25043-24D Dust Cap for Mating Connector (Optional) MS25042-24D</p> <p>Connector on Helicopter secured to airframe by wire lanyard or other acceptable method. Any method must ensure the electrical wiring shall not carry any load when the connector is disconnected.</p> <p>Mating Connector on Bucket, Hook, etc, must have the threaded locking ring removed.</p>	
Pin	Function	Bucket Wire Color																							
A	Up Limit Relay Coil	Green #16																							
B	Up Switch	White #16																							
F	+28 VDC/ Ground (Up)	White #12																							
G	Down Limit Relay Coil	Red #16																							
H	Ground +28 VDC (Down)	Black #12																							
I	Down Switch	Black #16																							
<p>#3. For SIMS Bucket (3 Wire Type) For additional information see FS/OASE-5</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Bucket Wire Color</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>+28 VDC/Ground</td> <td>Green</td> </tr> <tr> <td>G</td> <td>Ground (Close)</td> <td>White</td> </tr> <tr> <td>I</td> <td>+28 VDC (Open)</td> <td>Black</td> </tr> </tbody> </table>			Pin	Function	Bucket Wire Color	B	+28 VDC/Ground	Green	G	Ground (Close)	White	I	+28 VDC (Open)	Black	<p>3 PIN ACCESSORY POWER SOURCE (APS) CONNECTOR</p> <p>For. Supplemental Slip-in Radio Equipment, IR Equipment, Sphere Dispensers, and Miscellaneous Equipment.</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>+28 VDC (On 28 Volt Aircraft Only)</td> </tr> <tr> <td>B</td> <td>Aircraft Ground</td> </tr> <tr> <td>C</td> <td>+14 VDC (On 14 Volt Aircraft Only)</td> </tr> </tbody> </table>		Pin	Function	A	+28 VDC (On 28 Volt Aircraft Only)	B	Aircraft Ground	C	+14 VDC (On 14 Volt Aircraft Only)	
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B	Aircraft Ground																								
C	+14 VDC (On 14 Volt Aircraft Only)																								
<p>#4 For SIMS Bucket (8 Wire Type) For additional information see FS/OASE-6</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Bucket Wire Color</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>+28VDC (Open)</td> <td>White/Black</td> </tr> <tr> <td>D</td> <td>Aircraft Ground</td> <td>Blue & Green</td> </tr> <tr> <td>F</td> <td>+28 VDC System Power</td> <td>White, Red & Black</td> </tr> <tr> <td>H</td> <td>Indicator Light</td> <td>Red/Black</td> </tr> <tr> <td>I</td> <td>+28 VDC (Close)</td> <td>Orange</td> </tr> </tbody> </table>			Pin	Function	Bucket Wire Color	A	+28VDC (Open)	White/Black	D	Aircraft Ground	Blue & Green	F	+28 VDC System Power	White, Red & Black	H	Indicator Light	Red/Black	I	+28 VDC (Close)	Orange	<p>PARTS FOR APS CONNECTOR</p> <p>APS Connector MS3112E12-3S Mating Connector MS3116F12-3P Dust Cap for APS Connector (Optional) MS3181-12C</p>				
Pin	Function	Bucket Wire Color																							
A	+28VDC (Open)	White/Black																							
D	Aircraft Ground	Blue & Green																							
F	+28 VDC System Power	White, Red & Black																							
H	Indicator Light	Red/Black																							
I	+28 VDC (Close)	Orange																							
<p>#5 For Chadwick Bucket (2 Wire Type) For additional information see FS/OASE-4</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>+28 VDC/ Ground (Open)</td> </tr> <tr> <td>H</td> <td>Ground/ +28 VDC (Close)</td> </tr> </tbody> </table>			Pin	Function	B	+28 VDC/ Ground (Open)	H	Ground/ +28 VDC (Close)																	
Pin	Function																								
B	+28 VDC/ Ground (Open)																								
H	Ground/ +28 VDC (Close)																								

J.16 ACCEPTABLE PAINT SCHEMES

(1) Starting at blade tip, paint first 1/6th of blade length with gloss white. Paint second 1/6th of blade length with orange. Paint third 1/6th of blade length with gloss white. Paint next 1/3rd of blade length with orange. Paint remaining 1/6th of blade length with gloss white.

HUB

W	O	W	O	W	W	O	W	O	W
1/6	1/6	1/6	1/3	1/6	1/6	1/3	1/6	1/6	1/6

(2) One black and one white blade.

(3) Paint schemes previously approved under a Forest Service contract.

(4) Paint schemes and color variations specified by manufacturer in a service bulletin, instructions, or other manufacturer published document or text.

J.17 QUALITY CONTROL PROCEDURES FOR FUELING

Fueling operation shall conform with NFPA 407, Standard for Aircraft Fuel Servicing.

(1) DAILY

(A) Check for and remove any water from fueller tanks. A water check will be performed each morning before the vehicle is moved, after every reloading of fuel, washing of equipment, and after a heavy rain or snow storm.

(B) Drain all filter/separator drain valves and check for water and other contaminants. Draw off any accumulation of water.

(C) Draw off a sample from the fuel nozzle. Sample shall be collected in a clean, clear glass jar and examined visually. Any visual water, dirt, or filter fibers are not acceptable.

(2) DURING HELICOPTER FUELING PROCESS

(A) Check sight gauge for water, if equipped.

(B) Visually inspect fueller for leaks. Repair as necessary.

(3) WEEKLY

(A) With pump operating, pressure flush filter assembly. Continue flush operation until sample is clear, clean, and bright.

(B) Time flow rate with full open flow from nozzle. Record gpm to nearest 1/10 gallon.

(C) Check condition of covers, gaskets, and vents.

(D) Inspect all fire extinguishers for broken seals, proper pressure, and recharge date. Recharge as necessary.

(E) Inspect hoses for abrasions, separations, or soft spots. Weak hoses will be replaced.

(4) RECORD KEEPING

The fuel handler will keep a record containing the following information:

(A) Condition of: (clean, clear, bright, etc.)

1. Nozzle Sample
2. Filter Sump Sample
3. Tank Sump Sample

(B) Flow rate in gallons per minute to the nearest 1/10 gallon.

(C) Filter change

1. Reason
2. Date

(D) Record of source, location, when and quantity of fuel loaded into servicing vehicle.

The procedural tasks stated are not intended to be all inclusive, although they may be. Ensuring that uncontaminated fuel is used is the sole responsibility of the Contractor.

J 18 MALFUNCTION OR DEFECT REPORT, FAA FORM 8010-4 (5/81)

1. REGISTRATION NO. N:		DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION MALFUNCTION OR DEFECT REPORT			OMB No. 2120-003 USE EXPIRES 3/31/84	
2. AIRCRAFT	A. MAKE	B. MODEL	C. SERIAL NO.	SUBMITTED BY		
3. POWERPLANT						
4. PROPELLER				BA. COMMENTS (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)		
5. APPLIANCE/COMPONENT (Specify that includes part)	A. MAKE	B. MODEL	C. SERIAL NO.			
6. SPECIFIC PART (of component) CAUSING TROUBLE						
A. NAME	B. NUMBER		C. PART/DEFECT LOCATION			
D. PART TT	E. PART TSO	F. PART CONDITION	7. DATE SUB.			

NON-FAA USE ONLY
CONTROL NO.
ATA CODE

REP. STA.	B.
OPER. MECH.	C.
TAX. AIR	D.
MFG.	E.
FAA	F.
OTHER	G.
	H.

FAA Form 8010-4(5-81) SUPERSEDES PREVIOUS EDITIONS

J.19 MAINTENANCE, MALFUNCTION/INFORMATION REPORT

SUBMITTED TO:

CONTROL NUMBER

COMPANY NAME, ADDRESS, & PHONE NO.

DO NOT WRITE IN SHADED AREAS

MFG NO
 CUST NO

MO DAY YR

REPORT DATE
 OCCUR DATE

CONTACT: NAME _____

SUBMITTED BY:
 COMPANY NAME, ADDRESS, & PHONE NO.

SUBMITTED FOR:
 COMPANY NAME, ADDRESS, & PHONE NO.

PHONE NUMBER
 SIGNATURE

PHONE NUMBER
 CONTACT: NAME

CUSTOMER ORDER: COMPLETE FOR NONWARRANTY PARTS RETURNED FOR REASON CHECKED
 P. O. _____ "COST EST REQUIRED" REPAIR "OVERHAUL" EVALUATION "EXCHANGE" RETURN FOR CREDIT
 " OTHER (SPECIFY)

WARRANTY CLAIM: COMPLETE IF YOU ARE REQUESTING WARRANTY ADJUSTMENT
 "CREDIT FOR REPLACEMENT PART" "CREDIT FOR LOCAL REPAIR" "MFG WARRANTY REPAIR"
 " OTHER (SPECIFY)

REPAIR INFORMATION: COMPLETE WHEN WARRANTY ADJUSTMENT IF FOR LOCAL REPAIR; (OTHER IF APPLICABLE). ATTACH COPY OF REPAIR INVOICE OR WORK ORDER
 PARTS COST _____ LABOR _____ HRS @ US\$ PER HR _____ TOTAL REPAIR COST _____

AIRCRAFT DATA: COMPLETE ALL SECTIONS IF REPORTED PART HAS BEEN INSTALLED OR REPORTED PART IS A SPARE
 NOT INSTALLED, COMPLETE ONLY MFG/MODEL AND ENTER ?SPARE? IN N# BLOCK

MANF/MODEL	N#	SERIAL NUMBER	DELIVERY DATE	HRS AT DELIVERY	HRS AT OCCUR

REPORTED PART DATA: REQUIRED FOR ALL SUBMITTALS NOTE THE COMPLETED HISTORICAL RECORD MUST ACCOMPANY THIS SUBMITTAL IF PART HAS A SCHEDULED RETIRED OR O/H INTERVAL

QUANTITY	ATA CODE	PART NUMBER	PART NAME	SERIAL NUMBER	HRS AT OCCUR
ORIGINAL EQUIPMENT COMPLETE	IF NO, ã "YES" "NO"	PURCHASE ORDER OR INVOICE NO.	INVOICE DATE	A/C HRS AT INSTALL	INSTALL DATE
SHIPPING DATA ã COMPLETE ONLY IF REPORTED PART HAS BEEN SHIPPED	QUANTITY	WAY BILL NUMBER	CARRIER	DATE SHIPPED	

REPLACEMENT PART DATA: COMPLETE RELEVANT INFORMATION FOR PART INSTALLED

QUANTITY	PART NUMBER	SERIAL NUMBER	INVOICE OR PO NO.	INVOICE COST	" RECONDITIONED " NEW PART TIME
SHIPPING DATA ã COMPLETE ONLY IF REPORTED PART HAS BEEN SHIPPED	QUANTITY	WAY BILL NUMBER	CARRIER	DATE SHIPPED	

REASON FOR REPORT: CODE (IF APPLICABLE):
 ACTION: CODE (IF APPLICABLE):

J.20 FOREST SERVICE GRANTS OF EXEMPTION

DOT E-7700 and DOT E-8016 (5700 Manual)

J.21 AVIATION OPERATIONAL TEST STANDARDS

The following operational test standards apply to all contractually required/offered avionics equipment under Forest Service contract and OAS Interagency Fire contracts.

ITEM STANDARD

1. INSTALLATIONS, MAINTENANCE AND OTHER ITEMS:

- A. Visual Inspection: Inspect for obvious damage, inoperative displays, missing or incorrect parts, and proper labeling, documentation.
- B. Antennas, Mounting & Installation: Forward:reverse ratio of 2.5:1 or better, broadband, aircraft type, rigidity, doubling plates, proper bonding, proper RF cable, security, proper wire size.
- C. Schematics/wiring Diagrams: Presence, coverage or all contractually required systems.
- D. Accessory Power Source:
1. Connector: MS3112E12-3S installed, proper location, polarity, voltage at correct pins.
 2. Circuit Breaker :Amperage value, operation.
- E. Remote Cargo Hook Connector:
1. Connector: MS3101A24-11S installed, polarity, switched voltage, within 6" from cargo hook, securing lanyard.
 - 2 Circuit Breaker :50 Amp, operation.
- F. Primary Radio Power Switch: Proper operation, labeling.
- G. Cargo Bell and Light System (Smokejumper):
1. Cargo Bell: Location, activation, sound level.
 2. Light System: Activation, location, indicators.

2. COMMUNICATIONS SYSTEMS:

A. ELT:

1. Type: TSO-C91, TSO-C91a or TSO-126C.
2. Mounting: Per TSO (i.e. if TSO-C91a/C126C to structure, per Manufacturer instructions).

3. Antenna: External, proper mounting, correct location, portable antenna available (AP type).
 4. G-Switch: Subject ELT to a quick jerking motion (if easily removable).
 5. Battery Date: ELT date not expired, matching dates on ELT and in logbook.
 6. Operation: Manually operates, PRF acceptable, remote function and indication.
 7. Remote Location: Visible & accessible to pilot.
 8. Logbook. Annual FAR 91.207(d) test completed, battery date.
- B. VHF-AM Transceiver:
1. Type: Selectable frequencies in 25 kHz increments, 720 channel minimum.
 2. Operation: To & from service monitor.
 - a. Receiver: Squelch breaks at an acceptable level.
 - b. Transmitter: Modulation from 15% to 85%, frequency within 30 PPM (± 3.69 kHz using 122.9250 MHz).
- C. VHF-FM Transceiver:
1. Type: Meets FS/OAS A-19: AERONAUTICAL VHF-FM RADIO TRANSCEIVER SPECIFICATIONS.
 2. Power Output: 10 watts nominal value.
 3. VSWR: Forward:reverse ratio of 2.5:1 or better @ 150, 160 & 170 MHz.
 4. Antenna: Comant CI-177 or equivalent, installation & mounting.
 5. CTCSS Tone Encoder:
32 TIA/EIA-603 standard tones, 600 to 700 Hz level, frequency within 1.5 Hz.
 6. Guard Receiver: Squelch breaks @ 1 to 2 uV with direct connection at 168.625 MHz, audio output of at least 100 mV with wideband (3 to 5 kHz modulation) and narrowband (1.5 to 2.5 kHz modulation) inputs, less than 10% distortion.
 7. Guard Transmitter: Quickly selectable, operates @ 168.625 MHz, wideband deviation 3 to 5 kHz, narrowband deviation 1.5 to 2.5 kHz.

8. Main Receiver : Squelch breaks @ 1 to 2 uV with direct connection at 150, 160 and 170 MHz, audio output of at least 100 mV with wideband (3 to 5 kHz modulation) and narrowband (1.5 to 2.5 kHz modulation) inputs, less than 10% distortion.
9. Main Transmitter: Wideband deviation 3 to 5 kHz, narrowband deviation 1.5 to 2.5 kHz, wideband frequency within 5 PPM (± 842 Hz using 168.3500 MHz), narrowband frequency within 2.5 PPM (± 421 Hz using 168.3500 MHz).
10. Mounting: Meeting AC 43.13-2A, controls equally convenient to pilot and observer/co-pilot.

D. AUX-FM Provisions:

1. Operation: Check RX & TX functions through audio system(s), sidetone available, transmitter deviation output matches handheld's stand alone output.
2. VSWR: Forward:reverse ratio of 2.5:1 or better @ 150, 160 & 170 MHz.
3. Antenna: Comant CI-177 or equivalent, installation & mounting.
4. Mounting Facilities: Available meeting AC 43.13-2A, within 18" of AUX-FM connectors, controls convenient to observer/co-pilot.
5. Connectors: MS3112E12-10S and female BNC bulkhead mounted.

E. Public Address System: Acceptable operation.

F. Fuel Service Vehicle VHF-FM Mobile Radio:

- 1 Operational Check: Proper RX & TX operation.
2. Power Output: 30 watts minimum.
3. VSWR: Forward:reverse ratio of 2.5:1 or better @ 150, 160 & 170 MHz.
4. Antenna: Antenna Specialists ASP-1495; Maxrad MWB-5803, or equivalent, installation & mounting.
5. CTCSS Tone Encoder: 32 TIA/EIA-603 standard tones, 600 to 700 Hz level, frequency within 1.5 Hz.

6. Receiver: Squelch breaks @ .25 to .5 uV with direct connection at 150, 160 and 170 MHz, audio output of at least 100 mV, less than 10% distortion.
7. Transmitter: Frequency within 750 Hz, wideband deviation 3 to 5 kHz, narrowband deviation 1.5 to 2.5 kHz.
8. Field Programmability: Contractor demonstration.

G. Ground Proximity Warning System: Installed.

H. Cockpit Voice Recorder: Installed, proper mic & audio system operation

I. Flight Data Recorder: Installed.

3. NAVIGATION SYSTEMS:

A. Panel Mounted GPS:

1. Type: Panel mounted, aviation type.
2. Installation: Convenient to both pilot and observer/co-pilot.
3. Operation: Correct present position or lock-on. Database age does not exceed contract limit.

B. Handheld GPS (Light Fixed Wing):

1. Type: Handheld type.
2. Installation: Convenient to pilot. Install meets AC 43.13-2A. Uses aircraft power.
3. Antenna: External antenna with clear path to satellite signals.
4. Operation: Correct present position or lock-on.

C. LORAN (Air Tanker):

1. Type: Panel mounted, aviation type.
2. Installation: Convenient to both pilot and observer/co-pilot.
3. Operation: Correct present position or lock-on. Database age does not exceed contract limit.

D. VOR: Maximum bearing error of plus or minus 4 degrees, maximum var

- E. LOC: Maximum error of plus or minus 4 degrees. Flag pull.
- F. Glideslope: Maximum error of plus or minus 2 degrees. Flag pull.
- G. Marker Beacon: Indicator operation, acceptable sensitivity.
- H. DME: Proper heading to station, proper distance to station.
- I. TACAN (Air Tanker): Proper heading to station, proper distance to station.
- J. ADF: Points to station, 360 degree operation, acceptable audio.
- K. Weather Radar: Acceptable operation.
- L. Radar Altimeter: Acceptable operation.
- M. Transponder, Altitude Encoder, and Pitot-Static Systems: 14 CFR 91.411 & 91.413 logbook entries not expired.
- N. GPS Data Connector: Proper installation of 9 pin "D" connector.
- O. GPS Additional Antenna: Proper installation. Contractually required connector.

4. AUDIO SYSTEMS:

A. Audio Control System - General Requirements:

- 1. Location: Convenient to specified operator(s).
- 2. Labeling: Legible, understandable, permanent.
- 3. Specifications:
 - a. Hum, Noise and Crosstalk: 40 db below specified audio output.
 - b. Specified Audio Output: 100 mW with an input of 250 mV, both @ 600 ohms.
 - c. Distortion: Less than 10%.

B. Audio Control System (Helicopter):

- 1. General Requirements: See above.
- 2. Required controls: TX selectors, individual RX select switches, separate RX & ICS audio level controls.
- 3. Operation:

- a. TX Select: Selects proper radio & companion receiver.
- b. RX Select: Selects proper radio.
- c. ICS and RX Volume: Proper operation.
- d. Sidetone: Present for each transmitter.

- 4. Rappel/Shorthaul (when required):
Additional Audio Control System at Spotter station/long cord, Hot Mic capability.

C. Audio Control System (Light Fixed Wing):

- 1. General Requirements:
See above.
- 2. Required controls: TX selectors, individual RX select switches.
- 3. Operation:
 - a. TX Select: Selects proper radio & companion receiver. ATGS trainee operates TX from observer/co-pilot's audio control (when required).
 - b. RX Select: Selects proper radio.
 - c. RX Volume: Proper operation.
 - d. Sidetone: Present for each transmitter.

D. Audio Control System (Air Tanker):

- 1. General Requirements: See above.
- 2. Required controls: TX selectors, individual RX select switches.
- 3. Operation:
 - a. TX Select: Selects proper radio & companion receiver.
 - b. RX Select: Selects proper radio.
 - c. RX Volume: Proper operation.
 - d. Sidetone: Present for each transmitter.

E. Audio Control System (Smokejumper):

- 1. General Requirements: See above.
- 2. Required controls - Pilot/co-pilot:
TX selectors, individual RX select switches.

3. Required controls - Spotter:

TX selector, individual RX audio level controls, TX indication, separate RX master and ICS audio level controls.

4. Operation:

- a. TX Select: Selects proper radio & companion receiver.
- b. RX Select: Selects proper radio.
- c. RX Volume: Proper operation.
- d. Sidetone: Present for each transmitter.

5. INTERCOMMUNICATIONS SYSTEM (ICS)

A. Available at required positions:

Per contractually required locations.

B. Operation:

Proper audio & mic operation at each required position.

C. Hot Mic/Vox:

Presence per contract requirements, and proper operation.

D. PTT and Volume controls:

Presence per contract requirements, and proper operation.

E. Specifications:

1. Hum, Noise and Crosstalk:

40 db below specified audio output.

2. Specified Audio Output:

100 mW with an input of 250 mV, both @ 600 ohms.

3. Distortion:

Less than 10%.

F. Turbine Air Tankers:

ICS capability to exterior of aircraft-

J.22 APPROVAL FOR RAPPELLING ANCHORS USED IN USDA-FOREST SERVICE OPERATIONS

There are two options for approval:

1. FAA Approval (STC) - Design must be comparable with standardization efforts in the FS rappel program. Contact NIFC (Jon Rollens: 208-387-5634) or MTDC (Keith Windell: 406-329-3956) before installing commercially available designs or initiating a new design.

2. USDA-Forest Service Approval.

The USDA-Forest Service currently owns FAA STC'D rappelling anchor designs for the following aircraft:

1. Bell 206 L-1, L-3, L-4 / 407*
2. Bell 212

* The FS is in the process of testing the 407 overhead design by Aeronautical Accessories. Do not purchase the FS's 407 design until you have spoken to Keith Windell (MTDC).

These anchors are manufactured through PMA licensing agreements and may be purchased from:

Heli-Tech 4681 Isabelle St.
Eugene, OR 97402
Phone: (541) 344-2304

The USDA-Forest Service has approved three non-STC'd anchors for use in Forest Service operations. (The FS has no control over the availability of these designs):

1. Lama (Heli-Support design)
2. AS 350 (Heli-Support design)
3. Sikorsky S58T (Aris Helicopters)
4. Bell 205 (Heli-Jet)

RAPPEL ANCHOR INSPECTION:

The owner shall assure that the rappel anchor is in condition to perform. STC'D rappel anchor kits will have Instructions for Continued Airworthiness.

All non-STC'd rappel anchors shall be fabricated in accordance with the materials specified in the engineering drawings supplied to and approved by the Forest Service (FS). These anchors shall be installed with an FAA field approval. The 337 will include installation instructions and type of hardware. Development of an inspection routine for a non-STC'd rappel anchor is up to the anchor's designer (a copy of the inspections) and interval shall be sent to the Missoula Technology & Development Center MTDC). If there are any special inspections that are needed to assure continued airworthiness they will have to be complied with at time of rappel anchor installation and any subsequent inspection periods. The anchor will be inspected as part of the helicopter during the normal inspection cycle if it is permanently installed. If the anchor is not a permanent installation it will have to have an entry in the maintenance log at the time of installation. All of the anchors will have a serial number and a log of some type to document these inspections. The owner must supply Government Inspectors with a document at the start of each new contract period containing the following information:

1. A signed statement attesting to the fact that the rappel anchor offered in the contract has been recently inspected and found airworthy. It shall reference the

serial number of the anchor, date of inspection, and what type of inspection was performed. This statement shall be signed by the inspector and include their FAA authorization (i.e., A&P number).

2.NON-STC9D DESIGNS ONLY: A signed statement attesting to the fact that the anchor (referenced by serial number) has been fabricated and installed in accordance with the engineering drawings approved by the FS (state drawing number).

USDA-FOREST SERVICE RAPPEL ANCHOR APPROVAL PROCESS:

The Forest Service anchor approval process is currently in transition. Previously approved designs will have to come up to any new standards. Contact MTDC (Keith Windell) for up-to- date information.

J.23 ALASKA SUPPLEMENT

The following provisions shall apply when flying in Alaska. All other provisions not expressly changed herein continue to apply.

NOTE: Contractors from the lower 48 dispatched to Alaska need to have insurance coverage for Alaska, in addition to having Operations Specifications that permit Alaska operations.

(1) SECTION C, AIRCRAFT EQUIPMENT -

Add:

Tundra Boards or Snow Pads

Survival Kit - Aeronautical - Alaska

Portable fuel servicing equipment

The Contractor is responsible for providing navigation publications to include the Alaska Supplement.

(2) SECTION C, CONTRACTOR FURNISHED AVIONICS SYSTEMS -

Add to paragraph (1) (A):

1. For helicopter operations in Alaska only. If an automatic fixed ELT (ELT/AF) is installed in the aircraft, the vendor shall furnish a hand-held portable ELT/EPIRB. The ELT/EPIRB shall be compact and easily carried by the PIC (Emergency Products Corp. Model EBC-102, Emergency Locator Products Corp. Model ELP-1000 or equal).

(3) SECTION C, FUEL SERVICING VEHICLE SPECIFICATIONS -

Delete:

Entire section addressing fuel servicing vehicle specifications. A fuel servicing vehicle is not required for dispatch or work in Alaska.

(4) SECTION C, FUEL SERVICING VEHICLE DRIVER QUALIFICATIONS AND FUEL SERVICING VEHICLE DRIVER DUTY LIMITATIONS -

Delete:

Entire section addressing fuel servicing vehicle driver qualifications and duty limitations. A fuel servicing vehicle driver is not required for dispatch or work in Alaska.

(5) SECTION C, FUELING -

Delete as written and add: The Government will furnish, transport, and store all aircraft fuel required at no expense to the Contractor.

Grades of Government-furnished fuel vary from location to location, and the Contractor shall use the grade available. The appropriate type of fuel (Avgas or Jet fuel), in one of the following grades, will be available at each location:

AVGAS	JET FUEL
100	Jet A
100LL	Jet A-50
	Jet B
	Jet-4 or JP-5 or JP-8

Add:

All lubricating oil, parts, and supplies shall be furnished and transported by the Contractor to the Base(s) of Operation or any alternate Base(s).

The Contractor shall furnish for each aircraft a portable fuel pump, barrel stem, hoses, and filtration system for refueling in remote areas.

The filtration system shall include a unit which accomplishes water separation with positive shut-off. The size of the filtration system unit shall be compatible with pump size. One acceptable three-stage unit is FACET part number 050971. If this model FACET is used, the third stage monitor should be a Velcon part number CDF-210K which is rated to 10 GPM. Also acceptable are Velcon filter spin on 5 micron cartridges, part number 40505SP, rated to 13 GPM; or Velcon VF-31 with 1 micron cartridge element, part number ACO-21005B, rated to 15 GPM. All filtering components, shall be changed annually, or sooner if needed, and the date of the change shall be placarded on the canister.

1. Two complete filter changes shall be furnished by the Contractor.

2. The pump shall be hand operated.

(6) SECTION C, AVAILABILITY OF MECHANICS -

Delete as written and add:

The mechanic shall be present for all operations in Alaska. The mechanic shall accompany the helicopter to alternate bases of operations. The mechanic shall be present to service, inspect, and repair the helicopter as needed. The cost of the mechanic shall be included in the Daily Availability Rate.

(7) SECTION F, EXTENDED STANDBY -

Delete as written and add:

Crew availability for Alaskan operations shall be the same as that for the helicopter and associated equipment. Extended Standby does not apply.

(8) SECTION G, PAYMENT FOR AVAILABILITY -

Delete as written and add:

Operations in Alaska within the exclusive use period will be scheduled by the Government in accordance with flight time/duty time limitations. The schedule will not exceed:

SINGLE CREW: Maximum 14 hour per day PIC, or PIC and SIC.

DOUBLE CREW: Maximum 24 hours per day.

Measurement of availability will be reduced, as specified below, for each hour or portion thereof service is listed as unavailable to the Government.

SINGLE CREW: 1/14 per hour NTE 14/14 per day.

DOUBLE CREW: 1/24 per hour NTE 24/24 per day.

Availability, as measured above, will be paid at the applicable rate appearing in the Schedule of Items.

(9) SECTION G, TRANSPORTING OF RELIEF CREW -

Delete as written and add:

If ordered by the Government, the Contractor shall be reimbursed for the cost incurred in delivering personnel to the reporting base NOT TO EXCEED the round trip coach fare from Seattle-Tacoma International Airport. The ordering of additional personnel shall be annotated, (including date and time ordered) on the Flight Use Report and signed by the Government Representative placing the order. The Contractor agrees to deliver additional crew to the designated base within 48 hours

after notification. Reimbursement shall be supported by paid receipts and the passenger coupon or certified true copies that are legible.

(10) SECTION G, PAYMENT FOR OVERNIGHT ALLOWANCE -

Included in daily availability rate.

(11) SECTION G, PAYMENT FOR FUEL SERVICING VEHICLE AND MILEAGE -

Delete as written and add:

CONTRACTOR FURNISHED FUEL. The cost of fuel furnished by the Contractor in lieu of Government Furnished fuel will be reimbursed to the Contractor as provided below:

GENERAL. The Contractor shall not charge any fuel acquired under this contract directly to the Government. All fuel not otherwise furnished by the Government must be paid by or charged to the Contractor. The purchase must be approved by the Contracting Officer's Administrative Representative. Fuel related costs shall be recorded as a line entry (i.e., date, fuel charge, dollar amount, and use-item code FC), shall be summarized under "Other Charges/Credits" on the Aircraft Use Report (OAS-23), or Flight Use Report 6500-122, and shall be supported by paid legible, itemized invoices from the supplier. Certified true copies may be submitted in lieu of the original invoice.

Government furnished fuel used by the Contractor for maintenance flights, repositioning aircraft, crew transportation, or any other flight for the convenience of the Contractor, will be deducted from amounts due the Contractor at the rate of \$2.50 per gallon. Total credits shall be computed using published fuel consumption data chart for the type, make, and model of aircraft operated.

FERRY FLIGHTS THROUGH CANADA AND OPERATIONS WITHIN CANADA AND ALASKA. When dispatched to Alaska, upon crossing the 48 Conterminous United States and Canadian Border, the Contractor shall be reimbursed for fuel purchased in accordance with above. On the return (southbound) trip, fuel will either be Government furnished (at the Government's option), or be reimbursed until such time as the Contractor crossed the 48 conterminous United States and Canadian borders. Ferry flights must be the most direct route and all weather related delays or alternative route decisions must be clearly documented on the Flight Use Report or attached thereto.

Fuel for flight within the 48 conterminous States, incidental to a dispatch to or from Alaska, will not be reimbursed separately. The cost of such flights will be paid at the rate applicable to work performed in the 48 conterminous States.

(12) SECTION G, PAYMENT FOR TRANSPORTATION OF HELICOPTER FUEL -

Delete entire section.

(13) SECTION J -

Add:

SURVIVAL KIT - AERONAUTICAL - ALASKA

All aircraft will carry survival equipment. Survival kits will contain at least the following items and additional items required by local regulation as is appropriate for local climate and terrain conditions.

1. The minimum equipment to be carried during the summer months:
 - a. Food for each occupant sufficient to sustain life for 1 (one) week.
 - b. One ax or hatchet, and one knife.
 - c. One small gill net and an assortment of tackle such as hooks, flies, lines, sinkers, etc.
 - d. Two small boxes/containers of matches (waterproof).
 - e. Mosquito repellent.
 - f. One mosquito head net for each occupant.
 - g. One space blanket for each occupant.
 - h. Signal equipment:

6 - flares
1 - signal mirror
 - i. 50' nylon cord.
 - j. Candles (5 each).

2. In addition to the above, the following must be carried as minimum equipment from October 15 to April 1 of each year:

- a. One pair of snowshoes.
- b. One sleeping bag per two occupants.

(14) SECTION I -

Add the following:

Aircraft and General Public Liability Insurance - Department of the Interior (48 CFR 1452.227-71, May 1989)

- a. The Contractor, at the Contractor's expense, agrees to maintain, during the continuance of this contract, aircraft liability and general public liability insurance with

limits of liability for (1) bodily injury to or death of aircraft passengers of not less than \$75,000 for any one passenger and a limit for each occurrence in any one aircraft of at least an amount equal to the sum produced by multiplying \$75,000 by 75 percent of the total number of passenger seats installed in the aircraft, (2) bodily injury to or death of persons (excluding passenger) of not less than \$75,000 for any one person in any one occurrence and \$300,000 for each occurrence, and (3) property damage of not less than \$100,000 for each occurrence, or (4) a single limit of liability for each occurrence equal to or greater than the combined required minimum set forth in (1) through (3) above.

b. The Contractor also agrees to maintain workers' compensation and other legally required insurance with respect to the Contractor's own employees and agents.

J. 24 AERONAUTICAL VHF-FM RADIO TRANSCEIVER SPECIFICATIONS FOR USFS/USDOJ AS HELICOPTER CONTRACT USE

Aeronautical VHF-FM Radio Technical Performance Specifications:

This document specifies the minimum performance specifications for all aeronautical VHF-FM Radio Transceiver's used in conjunction with USFS/USDOJ Helicopters contracts..

1.0 Specification Tables:

Minimum standards for the specifications listed below are applicable to 5.0 Aeronautical Specification Table. Unless otherwise specified, the definition and method of measurement will be determined by RTCA DO-160* "Environmental Conditions and Test Procedures for Airborne Equipment", NTIA "Manual of Regulations & Procedures for Federal Radio Frequency Management" and applicable portions of the technical standards for aeronautical mobile radios, and TIA/EIA-603 "Land Mobile FM or PM Communications Equipment Measurement and Performance Standards". If DO-160* and TIA/EIA-603 conflict, then DO-160* shall apply. If the NTIA manual and TIA/EIA- 603 conflict, then the NTIA manual shall apply (see 4.0 for additional information). Each specification listed below is further identified in parenthesis for correlation:

- A. Useable Sensitivity (Reference Sensitivity).
- B. Selectivity (Adjacent Channel Selectivity and Desensitization).
- C. Spurious Attenuation (Spurious Response Immunity).
- D. Intermodulation (Intermodulation Immunity).
- E. Audio Power (Audio Power Output).
- F. Audio Distortion (Harmonic Distortion Factor).
- G. FM Hum & Noise (Signal-to-Residual Output Power Ratio).

H. **Frequency Stability:** The design center frequency shall be maintained within the frequency stability specified in parts per million (ppm).

I. **Multi-channel Frequency Spread:** A channel selector shall be provided to allow the operator to select the assigned operating frequency. All radio performance specifications shall be met when operated over the specified frequency spread.

J. **Conducted Spurious Emissions (Receiver).**

K. **Carrier Power Output:** All transmitters shall operate at the rated power and meet specifications after operation for a 30 second interval of transmitting into both a short circuit and an open circuit load connected to the antenna via a proper coaxial cable varied uniformly over a half-wave length. Normal antenna termination shall be a nominal 50 ohm load.

L. **Conducted Spurious Emissions (Transmitter).**

M. **Audio Frequency Harmonic Distortion (Transmitter).**

N. **Maximum Deviation:** In a transmitter, the maximum deviation limited bandwidth expressed in kHz.

2.0 General Requirements:

A. Channel Capacity: The main radio shall be frequency synthesized. The guard receiver may be synthesized or crystal controlled. The main receiver and transmitter shall be able to operate on any channel in the National Telecommunications and Information Administration (NTIA) and Federal Communications Commission (FCC) basic channeling plans in the VHF-FM frequency band. Bandwidth (wide/narrow) shall be operator selectable by channel.

B. Channel Presets: The minimum number of operator selectable preset channels for the main radio shall be fifteen. The minimum and maximum number of selectable preset channels for the guard radio shall be two. Preset channels shall contain receive and transmit frequencies. Preset channels should also contain CTCSS tone and alpha numeric channel information.

C. Programming:

1. Configuration: The radio shall be capable of configuration programming and editing. This shall enable the operator to customize the desired features of the radio. The purpose of this requirement is to minimize the necessary steps during normal programming operations and to avoid scrolling through menu items that are not needed.

2. Presets: All preset channels shall be operator programmable while in flight, utilizing the front panel controls. The main and guard receivers

shall not be disabled during programming. Programming shall not require that the radio be turned off to enable.

3. Guard Frequency: The guard frequency programming and edit functions shall be disabled during normal programming operations to ensure that the guard preset frequency assignment remains undisturbed during main frequency programming operations.

D. Guard Transmit: A means of quickly selecting the guard transmitter frequency shall be provided.

E. Guard Receiver: One guard frequency of 168.6250 MHz shall be simultaneously monitored with the main frequency.

F. Audio Input Sensitivity:

1. The audio required to fully modulate the transmitter shall not exceed that normally produced by the aircraft's audio system and/or microphone. Standards which govern aircraft audio systems, headsets and microphones can be referenced from applicable TSO's governed by 14 CFR Part 21 and indexed in Advisory Circular 21-110(*), RTCA DO-214 "Audio Systems Characteristics and Minimum Operational Performance Standards for Aircraft Audio Systems and Equipment", and RTCA DO-160* above.

2. The radio shall have microphone audio, PTT, and receive (600 ohm impedance) audio available at the receptacle on the rear of the panel mounted unit (either the radio or the control head) for interface with aircraft audio panel. The microphone will normally be a noise canceling, single button carbon or amplified dynamic microphone commonly used in aircraft communications (typically 100 ohm impedance, 250 millivolts). PTT operation shall be provided by contact closure to the airframe ground.

G. Transmit Sidetone Audio:

1. Sidetone audio will be provided to permit the operator to monitor audio input to the transmitter and to assist the operator with word annunciation during high ambient noise conditions.

2. Sidetone output shall be 3 to 10 dB below the adjusted receiver output level. The distortion shall not exceed 5%. The sidetone level below the receive audio output shall be internally adjustable.

H. Deviation Symmetry:

1. **Definition:** Deviation symmetry is a measure of the modulator's ability to produce symmetrical positive and negative deviation of the carrier frequency.

2. **Minimum Standard:** The deviation symmetry shall be within 0.5 Hertz.

I. Display:

1. Format: The radio shall simultaneously display the channel number in use and frequency in use, or channel number in use and a minimum nine character, operator programmable alpha numeric channel designator. The display of the frequency and the alpha numeric channel designator need not be simultaneously displayed, but shall be operator selectable if it is not simultaneously displayed.

2. Types: The type of displays acceptable for avionics systems are: CRT, LED, EL (electro luminescent gas discharge type), and LCD (active matrix and diachronic types). Displays shall be avionics quality, shall meet human factors requirements for aviation, shall operate over the temperature range of -20 degrees C to +70 degrees C, and shall have a minimum acceptable viewing angle of +/- 80 degrees.

J. Channel/Frequency Selection: Channel and frequency selection shall be provided to permit the operator to select any preset channel, frequency, frequency pair, or CTCSS tones while in flight.

K. Volume Controls: Separate volume controls will be provided for the main and guard receive audio outputs. The audio outputs will be combined as a single output. The adjustable audio output range of the guard receiver shall not be less than 1 milliwatt.

L. Primary Power: A primary power on/off switch shall be provided.

M. Indicators: Indicators shall be provided to indicate transmitter activation, signal reception for the main receiver and signal reception for the guard receiver.

N. Squelch Override: A squelch override switch shall be provided to the operator for receiver testing and volume setting.

O. CTCSS Encoder: A Continuous Tone Controlled Squelch System (CTCSS) encoder complying with TIA/EIA-603 shall be provided. The encoder will provide all standard 39 tones. The tone selections shall be operator selectable by channel.

P. Encryption: If applicable, voice and data encryption shall be APCO 25 compatible (see 4.0).

Q. Digital Operation: Any radio capable of digital operation shall be APCO 25 compliant.

R. Operating Standards: The radio shall meet all required items in 6.0, RTCA DO- 160*, and conform to 14 CFR Part 23.1309.

3.0 Leading Particulars:

A. Finish: The front panel shall be standard avionics non-reflective flat black or gray in color. The metal housing shall be anodized aluminum or similar avionics grade material.

B. Front Panel: The front panel shall be a backlit panel operable from the avionics dimming bus.

C. Power Supply Voltage Range: Radio performance shall meet RTCA DO-160*, Section 16.0, category B standard for a nominal 14 VDC or 27.5 VDC primary power input voltage.

D. Temperature Range: Radio shall operate over the temperature range of -30 degrees C to +60 degrees C and shall meet RTCA DO-160* categories BIZB minimum for temperature and altitude, in-flight loss of cooling, and temperature variation tests respectively.

E. Identification Tag: An identification tag will be permanently affixed to the exterior of each unit for quick identification. The equipment manufacturer, model number, part number, serial number, revision status, FCC compliances, and RTCA DO-160* (see 6.0) environmental categories shall be identified.

F. Labeling: All controls shall be clearly and permanently labeled and shall be easily discernible whenever the backlit panel is illuminated.

4.0 Glossary:

ARINC: Aeronautical Radio, Inc
 2551 Riva Road
 Annapolis, MD 21401
 (410) 266-4000

DO-160* References to DO-160* indicate the most current version of RTCA DO-160 when the radio is tested

RTCA: Radio Technical Commission for Aeronautics
 1140 Connecticut Ave., N.W., Suite 1020
 Washington, D.C. 20026
 (202) 833-9339

TIA/EIA: Telecommunications Industry Association/ Electronic Industries Association

TIA/EIA documents can be obtained from:

Telecommunications Industry Association

2500 Wilson Blvd.
 Arlington, VA 22201
 (703)907-7700

Electronic Industries Alliance

2500 Wilson Blvd.
 Arlington, VA 22201
 (703)907-7500

ARINC, Project 25, RTCA and TIA/EIA documents can be obtained from:

Global Engineering Documents
15 Inverness Way East
Englewood, CO 80112
USA Tel (800) 854-7179 CANADA TEL (613) 237-4250
<http://global.ihs.com>

NTIA: National Telecommunications and Information Administration of the United States Department of Commerce

Manual of Regulations and Procedures for Federal Radio Frequency
Manuals available from:

U.S. Government Printing Office
Superintendent of Documents
Mail Stop: SSOP
Washington, DC 20402-9328

14 CFR Code of Federal Regulations for aviation and aerospace.

Federal Aviation Regulations available from:

Jeppesen Sanderson
55 Inverness Drive East
Englewood, CO 80112
(303) 799-9090
www.jeppesen.com

ATR: Air Transport Racking. A basic unit of width for a LRU per ARINC 404A.

LRU: Line Replaceable Unit. Formal term for the basic avionics "black box".

MCU: Modular Concept Unit. A basic unit of width for an LRU per ARINC 600.

5.0 Synthesized Aeronautical VHF-FM Radio Transceiver Specification Table

Specification		VHF-FM
A. Useable Sensitivity (uV)	RX	1.0
B. Selectivity (dB)	RX (25 kHz)	-70
	RX (12.5 kHz)	-60
C. Spurious Attenuation (dB)	RX	-70
D. Intermodulation (dB)	RX	-70
E. Audio Power(milliwatts)	RX	100
F. Audio Distortion (%)	RX	5
G. FM Hum & Noise (dB)	RX & TX	40
H. Frequency Stability (ppm)	RX & TX (25 kHz)	5
	RX & TX (12.5 kHz)	2.5
I. Multi channel Frequency Spread (MHz)	RX & TX	24
J. Conducted Spurious Emissions (dBW)	RX	-80
K. Carrier Power Output (Watts, nominal)	TX Low	1
	TX High	10
L. Conducted Spurious Emissions $\text{dB} = 43 + 10 \log (10) P_o$	TX(10 watt)	56
	TX (1 watt)	43
M. Audio Frequency Distortion (%)	TX	4
N. Maximum Deviation (+/- kHz)	TX (25 kHz)	5
	TX (12.5 kHz)	2.5

6.0 RTCA DO-160* "Environmental Conditions and Test Procedures for Airborne Equipment"

All equipment shall comply with DO-160* as a minimum acceptable aviation and avionics standard. The environmental categories with minimum acceptable tests and the minimum required categories are as follows:

Section:	Cat:	Test:
4.0 R	B1	Temperature and Altitude
4.5.4R	Z	In-Flight Loss of Cooling
5.0 R	B	Temperature Variation
6.0 R	A	Humidity
7.0 R	A11	Operational Shocks and Crash Safety
8.0 R	N	Vibration
9.0 X		Explosion Proofness
10.0 R1	W	Waterproofness
11.0 X		Fluids Susceptibility
12.0 X		Sand and Dust
13.0 X		Fungus Resistance
14.0 X		Salt Spray
15.0 R2	A	Magnetic Effect
16.0 R	B	Power Input
17.0 R	B	Voltage Spike
18.0 R	B	Audio Frequency Conducted Susceptibility
19.0 R	A	Induced Signal Susceptibility
20.0 R	U	Radio Frequency Susceptibility
21.0 R	A	Emission of Radio Frequency Energy
22.0 X		Lightning Induced Transient Susceptibility
23.0 X		Lightning Direct Effects
24.0 X		Icing

X = Not Applicable.

R = Required Test.

R1 = Required for remote mounted equipment only.

R2 = If equipment is a remote mounted transceiver, it shall meet category B or better, whereas the control head shall meet category A or better. Panel mounted radios shall meet category A or better.

J.25 Aircraft Performance Questionnaire:

Company: _____ Date: _____

Aircraft Make, Model, and Variant: _____ N# _____

Instructions: For each aircraft offered please fill out the following table, using FAA approved data for each altitude and temperature. Use the standard interagency Load Calculation Form (see Section J.12) as a matrix for performance calculations.

HIGE <u>2500@35°C</u>	HOGE <u>2500@35°C</u>	HIGE <u>5000@30°C</u>	HOGE <u>5000@30°C</u>	HIGE <u>8000@25°C</u>	HOGE <u>8000@25°C</u>	HIGE <u>10000@20°C</u>	HOGE <u>10000@20°C</u>	HIGE <u>12000@15°C</u>	HOGE <u>12000@15°C</u>

- **Please enclose:** Copy of Type Certificate, or supplemental certification applicable for the aircraft offered.
- Clear and legible copy of the standard interagency Load Calculation Form (see Section J.12) form used in payload calculations.
- Clear and legible copy of FAA approved performance charts used to calculate aircraft performance.
- Failure to submit supporting data used in payload calculations may result in the aircraft not being considered for contract award.
- The Government will confirm aircraft weights at time of inspection.

NOTE: The minimum performance requirement is based on hovering-out-of-ground (HOGE) at 5000 feet MSL, 30°C, and 8000 feet MSL and 25°C. The Government will factor in a weight of 200 pounds per required crewmember, and 1.5 hours of fuel (@ contract burn rate).

I certify that I have examined the data submitted and to the best of my knowledge, it is true and correct.

Signed: _____ Title: _____ Date: _____

J.26		CWN MANAGERS ASSIGNMENT CLOSE-OUT	
To be completed at the end of your tour.			
This form is to improve the quality level of Call-When-Needed Helicopter Contracts. Your remarks will assist us in improving our interagency standards for CWN Helicopter Contracts and Contractors.			
CONTRACTOR'S NAME:	CONTRACT # :	A/C N-#	
YOUR NAME:	EMAIL:	AGENCY:	
YOUR ASSIGNMENT DATE:	RELEASE DATE:	PHONE # :	
1. Was the helicopter kept clean and neat?			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
QUALITY COMMENTS:			
2. Did the fuel truck provide reliable service?			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
QUALITY COMMENTS:			
3. Did the company keep you fully informed on the condition of the crew, helicopter, and fuel truck? Yes <input type="checkbox"/> No <input type="checkbox"/>			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
QUALITY COMMENTS:			
4. Did the contractor abide by all provisions of the contract? Yes <input type="checkbox"/> No <input type="checkbox"/>			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
COST CONTROL COMMENTS:			
5. Would you take your next assignment with this contractor? Yes <input type="checkbox"/> No <input type="checkbox"/>			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
COST CONTROL COMMENTS:			
6. Was the crew and helicopter supported by the company in a timely manner? Yes <input type="checkbox"/> No <input type="checkbox"/>			
TIMELINESS OF PERFORMANCE COMMENTS:			
7. During any mechanical problems, were you informed of the problem and the progress of the work being done to fix the aircraft? Yes <input type="checkbox"/> No <input type="checkbox"/>			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
TIMELINESS OF PERFORMANCE COMMENTS:			
8. Did the flight crew/fuel truck/mechanic arrive on time each day? Yes <input type="checkbox"/> No <input type="checkbox"/>			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
TIMELINESS PERFORMANCE COMMENTS:			
9. Were crew changes handled with little or no confusion, and, was there a briefing between crew members being exchanged? Yes <input type="checkbox"/> No <input type="checkbox"/>			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
BUSINESS RELATIONS COMMENTS:			
10. Were you treated like a preferred customer? Yes <input type="checkbox"/> No <input type="checkbox"/>			
DOES NOT MEET REQUIREMENTS	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/>	EXCEEDS ALL REQUIREMENTS	
BUSINESS RELATIONS COMMENTS:			
Would you like someone to contact you about this contractor? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Complete at the end of your assignment and FAX to contracting @ 208-387-5384			

J.27 HELICOPTER AND FUEL SERVICE VEHICLE PRE-USE CHECKLIST

HELICOPTER & SERVICE TRUCK PRE-USE CHECKLIST

GENERAL		HOBBBS READING:
DATE:	AIRCRAFT MAKE/MODEL:	FAA REGISTRATION #:
VENDOR:		
PILOT(S) NAME(S):		
CARD EXPIRATION DATE(S):		
PILOT(S) CARDED FOR INTENDED MISSION(S)?: () YES () NO		
A/C CARD EXPIRATION DATE:		A/C CARDED FOR INTENDED MISSION(S)?:
DEPT. BASE:	DEPARTURE HOBBBS READING:	ARRIVAL HOBBBS READING:

LOGBOOK REVIEW		
50/100-HR, PROGRESSIVE, OR OTHER INSPECTION PROGRAM UP-TO-DATE?	() YES	() NO
ENTRIES INDICATING DAMAGE TO AIRCRAFT?	() YES	() NO
POWER CHECK COMPLETED/RESULTS SATISFACTORY?	() YES	() NO
COMMENTS ON LOGBOOK:		

CONDITION OF HELICOPTER		
ITEM	OK	DOCUMENT INOPERABLE OR DAMAGED EQUIPMENT (DENTS, TEARS, LEAKS, ETC.)
Skin and Exterior		
Windows		
Doors		
Upholstery		
Cargo Compartment		
Skids/Wheels		
Fixed Tank		
Bucket		
COMMENTS:		

REQUIRED HELICOPTER EQUIPMENT INSTALLED AND OPERATIVE (CONSULT CONTRACT)					
ITEM	YES	NO	ITEM	YES	NO
Seat Belts and Harnesses			Strobe Light(s)		
Hi-Visibility Paint On Main Rotor Blades			Survival Kit		
9600-Channel Radio			First Aid Kit		
VHF-AM 720-Channel			Fire Extinguisher(s)		
Auxiliary Radio Adapter			Cargo Hook		
Loran/GPS			Convex Mirror		
High Skid Gear			Bucket		
Nine-Pin Plug (Type 3 helicopters only)			Other:		
COMMENTS:					

REQUIRED SERVICE TRUCK EQUIPMENT INSTALLED AND OPERATIVE (CONSULT CONTRACT)					
ITEM	YES	NO	ITEM	YES	NO
Spare Set Of Filters			Filter Change Date Placarded		
Fire Extinguisher(s) Current			Ground Cables		
Hazmat Marking and Placards			Fuel Quality Control Log		
Inspection Sticker			Absorbent Materials For Spills		
COMMENTS:					
Beginning Odometer Mileage:					

SIGNATURE OF INSPECTING GOVT. REPRESENTATIVE:	PRINT NAME	DATE
---	------------	------

WHITE: CO YELLOW: AGENCY MAINT. INSPECTOR BLUE: CONTRACTOR GREEN: HELIC MGR
 HCM-2 (Test)
 (May, 1994)

J.28 HELICOPTER SYNTHETIC LONG LINE GUIDELINES

1. Rope Requirements

a. Material Type

Helicopter synthetic long-lines shall be constructed from the HMWPE or HMPE (High Molecular Weight Polyethylene) family of rope fibers including brand names such as Spectra® by Allied Signal or fibers with similar properties. Spectra® has very high strength, high flex fatigue life, very low stretch (less than 1% elongation at 30% of break strength), excellent chemical resistance, and less than 1% water absorption. Another high strength, high performance rope fiber is Vectran® produced by Hoechst-Celanese. Rope brand names made from these types of fibers include Plasma 12, Spectron II, and Spectron 12 or AmSteel. Ropes from these fibers are usually twelve-strand or double braid construction.

b. Rope Diameter

Minimum rope diameter shall be ½-inch.

c. Working or Rated Load

The working or rated load of a rope is the maximum static load that will be lifted by the rope. Working loads are based on a percentage of the approximate breaking or ultimate strength of the rope when new and unused. The working load shall be appropriate to the lifting capability of the helicopter.

For reference, lifting capability for each category of helicopter is as follows:

- Type 1 8000 to 30000 lbs. or greater.
- Type 2 1600 lbs. to 4500 lbs.
- Type 3 750 to 1600 lbs

d. Factor of Safety

A factor of safety of 7 shall be used for helicopter synthetic long-lines. Therefore, all ropes shall have an ultimate strength of seven times the rated or working load. For example, if a Type II helicopter line will have a working load of 4,500 pounds, the rope must have a strength when new of at least 31,500 pounds. Rope diameters will vary depending on strength and type of rope.

e. Knots and Splices

No knots are permitted in the synthetic long-line. Knots can decrease rope strength by as much as 50%. Splices may be used in the assembly of the long-line, but no additional splicing may be done once the line is put into service. Splices should always follow the manufacturer's recommended splicing practices.

f. Protective Coatings and Covers

Rope manufacturers offer protective coatings such as aromatic urethane coatings, which help with abrasion resistance and provide some UV protection. The coating just appears as a dye on the rope and does not change the rope dimension. Heavy plastic coatings are not recommended because the inside of the rope cannot be inspected. Some companies also sell “sleeve” covers that attach with Velcro. These are easily removable for rope inspection and provide the greatest UV and debris protection. It is recommended but not required that synthetic long-lines have the UV coating and/or the removable covers to help protect the lines.

2..Rope Care and Usage

a. Heat

Rope strength can be seriously decreased by heat exposure. The critical temperature of rope is the temperature at which 50% strength loss can occur. The critical temperature of HMWPE type ropes is only 150° F, and melting temperature is 297° F. Critical temperatures for other types of rope are: Polypropylene 250°, Kevlar 400° F, Nylon 350° F, Polyester 350° F.

b. Chemicals and Dirt

Chemicals can cause damage to rope. Keep ropes away from acids, bleach and solvents.

Laundry detergents can also weaken rope, and ropes should only be rinsed if cleaning is needed.

Grit from mud, dirt and sand can work into the rope fibers and cause deterioration. It is difficult to inspect for any debris that has worked its way inside the rope fibers. It is important to keep ropes clean.

c. Ultraviolet

Ultraviolet (UV) exposure causes degradation in rope strength. According to the American Group, a rope manufacturer, the AmSteel® fibers lose approximately 30% of their strength after five or six months of sun exposure.

d. Storage

In addition to keeping the rope away from heat, ropes should be stored clean, dry, and out of direct sunlight. Helicopter synthetic long-lines should be stored in a rope bag away from batteries and chemicals. If ropes are wet, ideal storage is off the floor on racks to provide ventilation. Never store rope on concrete or dirt floors. Grit from dirt can abrade and weaken rope fibers. Acid is often used in concrete work and can remain on the surface. Abrasive surfaces should also be avoided.

Never step on rope, drive over rope or allow the helicopter to land on the rope. If any of these occur, inspect the line for damage and enter the event in the rope log.

e. Shock Loads

A line is shock or impact loaded when it suddenly changes from no load or low load to high load. The further the load falls, the greater the impact. Since synthetic fibers have a memory, the effects of shock loading remain with time and can result in failure even when loaded within the normal range. Any shock loading noticed by the pilot or crew should be recorded in the log.

2. Rope Documentation

All synthetic long-lines will be assigned a unique identification number that will be retired with the long-line. Synthetic long-lines shall be permanently and legibly marked with a unique identification number, the rated load of the line, and manufacture date.

A documented history of each synthetic long-line must be maintained from the date of purchase until its retirement from service. A rope log will be assigned to each synthetic long-line to record the rope history.

The following minimum items shall be recorded in the rope log:

- Manufacture Date
- Date Put Into Service
- Rope ID Number
- Date of External Load and/or Inspection
- Approximate Weight of Load Lifted
- Number of Lifts per day at each weight
- Remarks/Problems
- Inspector Signature/Initial

Examples of items to note in the remarks/problems section could include any unusual shock loading noticed by the pilot or crew, exposure to chemicals or excessive dirt, problems such as the rope landed on by the helicopter skid, or any irregularities found during inspection.

3. Rope Retirement and Inspection

No visual inspection can accurately determine residual strength. Avoid using rope that shows sign of aging and wear. If in doubt, destroy the used rope. Rope should be inspected after each day of use.

a. Abrasion

All rope fibers contribute to rope strength. When either the outer or inner fibers are worn, rope strength is reduced. Check the line regularly for frayed and broken strands. Rethread pulled strands into the rope if possible. Open the rope strands to look for powdered fiber that is a sign of internal wear.

b. Compacted Rope

Ropes can become hard or compacted when heavily used. Any rope that has become hard or compacted indicates reduced strength and should be discarded.

c. Heat Damage

Glazed or glossy areas indicate heat damage and decreased strength. Even normal looking fibers adjacent to the visibly heat damaged areas have been damaged.

d. Inconsistent Diameter

Flat areas, lumps or bumps can indicate internal damage from overloading and usually indicates reason to replace the rope.

e. Discoloration

All ropes will get dirty. Check for unusual discolorations that could indicate chemical contamination. Determine source of contamination, and replace the rope if it is brittle or stiff.

f. Rope Inspection Check List

The following inspection checklist is taken from the American Group rope catalog. If any of these conditions are met, discard the rope.

Condition

1. Original rope bulk reduced by abrasion:
 - Double braid cover by 50%
 - Twelve-strand braid by 25%
 - Eight-strand plait by 25%
2. Fiber strands cut:
 - Double braid by three or more adjacent strands cut
 - Twelve-strand braid by two or more adjacent strands cut
 - Eight-strand plait by one or more adjacent strands cut
3. Diameter inconsistency:
 - Localized diameter reduction
 - Flat areas
 - Lumps and bumps in rope
4. Glossy or glazed fiber:
 - Localized or extended areas
5. Inconsistency of texture:
 - Localized or extended areas or stiffness
6. Discoloration:
 - Localized or extended areas caused by chemical contamination

g. Retirement

No rope shall be used more than five years after its manufacture date and no more than three years after its put in service date.

NOTE:

Proposed test program

To better evaluate the performance and appropriate service life of synthetic long-lines, a test lot of at least ten lines could be purchased and distributed for use in the field. A sample of rope from each rope lot purchased would be pull tested to failure to determine a rope strength baseline. During the initial evaluation period, at least two ropes would be removed from service after one year of service and pulled to failure to test residual strength. After two years of service, at least two ropes would be pulled to failure to test residual strength.

J.29 HELICOPTERS MAKE/MODEL/SERIES LISTS

Helicopter Like Makes and Models	
<i>Make</i>	<i>Model</i>
Bell	47 series (all Recips)
Bell	47 series Soloy
Bell	206A, 206B, series
Bell	206L series
Bell	212, 412,
MD	369 (500) series
MD	520N, 600
MD	MD-900, 902
Enstrom	28, 280 series
Eurocopter	SA 315, SA 316, SA 319
Eurocopter	AS 350/355 series
Hiller	12 series (Recips)
Hiller	12 series (Soloy)
Schweizer	269, 300 series (Recips)

This list does not specifically follow the FAA guidelines as it relates to 14 CFR 135.293 competency.

Similar military aircraft are not acceptable for grouping.

Grouping of like makes and models of aircraft allows determination of pilot authority. Differences training must be completed for each of the makes/models in a grouping. Make/model qualification and currency are met with time flown in any aircraft in grouping.