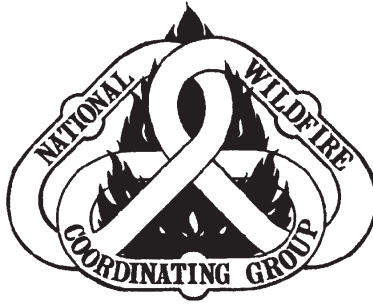


BASE/CAMP MANAGER

J-254



Job Aid
FEBRUARY, 2004
NFES 1532



CERTIFICATION STATEMENT

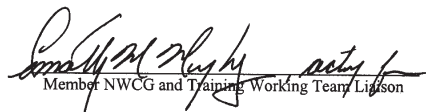

on behalf of the

NATIONAL WILDFIRE COORDINATING GROUP

The following training material attains the standards prescribed for courses developed under the interagency curriculum established and coordinated by the National Wildfire Coordinating Group. The instruction is certified for interagency use and is known as:

Base/Camp Manager, J-254
Certified at Level I

This product is part of an established NWCWG curriculum. It meets the COURSE DEVELOPMENT AND FORMAT STANDARDS – Sixth Edition, 2003 and has received a technical review and a professional edit.

 Member NWCWG and Training Working Team Liaison	 Chairperson, Training Working Team
Date <u>February 18, 2004</u>	Date <u>2/13/04</u>

Description of the Performance Based System

The NWCG Wildland and Prescribed Fire Qualifications System is a “performance-based” qualifications system. In this system, the primary criterion for qualification is individual performance as observed by an evaluator using approved standards. This system differs from previous wildland fire qualifications systems which have been “training based.” Training based systems use the completion of training courses or a passing score on an examination as a primary criteria for qualification.

A performance-based system has two advantages over a training based system:

- Qualification is based upon real performance, as measured on the job, versus perceived performance, as measured by an examination or classroom activities.
- Personnel who have learned skills from sources outside wildland fire suppression, such as agency specific training programs or training and work in prescribed fire, structural fire, law enforcement, search and rescue, etc., may not be required to complete specific courses in order to qualify in a wildfire position.

1. The components of the wildland fire qualifications system are as follows:

- a. Position Task Books (PTB) contain all critical tasks which are required to perform the job. PTBs have been designed in a format which will allow documentation of a trainee’s ability to perform each task. Successful completion of all tasks required of the position, as determined by an evaluator, will be the basis for recommending certification.

IMPORTANT NOTE: Training requirements include completion of all required training courses prior to obtaining a PTB. Use of the suggested training courses or job aids is recommended to prepare the employee to perform in the position.

- b. Training courses and job aids provide the specific skills and knowledge required to perform tasks as prescribed in the PTB.
- c. Agency Certification is issued in the form of an incident qualification card certifying that the individual is qualified to perform in a specified position.

2. Responsibilities

The local office is responsible for selecting trainees, proper use of task books, and certification of trainees, see appendix A of the NWCG Wildland and Prescribed Fire Qualification System Guide, PMS 310-1, for further information.

**National Wildfire Coordinating Group
Training Working Team
Position on Course Presentation and Materials**

The suggested hours listed in the Field Manager's Course Guide are developed by Subject Matter Experts based on their estimation of the time required to present all material needed to adequately teach the unit and course objectives. The hours listed can vary slightly due to factors such as the addition of local materials. NWCG is aware that there have been courses presented in an abbreviated form, varying greatly from the suggested course hours. Instructors and students are cautioned that in order to be recognized as an NWCG certified course certain guidelines must be followed. These guidelines are:

- Lead instructors are encouraged to enhance course materials to reflect the conditions, resources and policies of the local unit and area as long as the objectives of the course and each unit are not compromised.
- Exercises can be modified to reflect local fuel types, resources and conditions where the student will be likely to fill incident assignments. The objectives and intent of the exercises must remain intact.
- Test questions may be added that reflect any local information that may have been added to the course. However, test questions in the certified course materials should not be deleted to ensure the accurate testing of course and unit objectives.
- Test grades, to determine successful completion of the course, shall be based only on the questions in the certified course materials.

If lead instructors feel that any course materials are inaccurate, that information should be submitted by e-mail to NWCG Fire Training at nwcg_standards@nifc.blm.gov. Materials submitted will be evaluated and, where and when appropriate, incorporated into the appropriate courses.

BASE/CAMP MANAGER

J-254

Job Aid
FEBRUARY, 2004
NFES 1532

Sponsored for NWCG publication by the NWCG Training Working Team.

Comments regarding the content of this publication should be directed to:
National Interagency Fire Center, National Fire Training Support Group, 3833 S. Development Ave., Boise, Idaho 83705. E-mail: nwcg_standards@nifc.blm.gov.

Additional copies of this publication may be ordered from National Interagency Fire Center, ATTN: Great Basin Cache Supply Office, 3833 South Development Avenue, Boise, Idaho 83705. Order NFES 1532.

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BASE/CAMP MANAGER (BCMG) JOB AID, J-254 INTRODUCTION

The Base/Camp Manager is responsible for appropriate sanitation and facility management services in the assigned Base/Camp.

The Base/Camp Manager has been identified as a position within the National Wildfire Coordination Group's (NWCG), Wildland Fire Suppression Curriculum. The courses within the performance based curriculum may be administered by either an instructor led formal training course or by the use of "job aids." It is highly suggested that the trainee have previous fire incident experience.

Job aids are "how to" books that assist an individual in performing specific tasks associated with a position. They may be used by an individual, in a trainee position, who has met all of the prerequisites, but has not completed the position task book for that position. They are also used after the individual has become qualified, as an aid or refresher in doing the job.

The performance based qualification system stipulates that an individual must complete a position task book prior to becoming qualified for that position. Refer to the "Wildland and Prescribed Fire Qualification System Guide, PMS 310-1 for the established standards for this position. *It is recommended that this job aid be issued when the position task book is initiated.*

This job aid has been developed by an interagency development group with guidance from the National Interagency Fire Center, Fire Training under authority of the NWCG, with coordination and assistance of personnel from the following agencies:

UNITED STATES DEPARTMENT OF THE
INTERIOR
Bureau of Land Management
Gordon Shafer

STATE OF FLORIDA
Center for Wildfire and Forest Resources
Management Training
Richard Inmon

NATIONAL INTERAGENCY FIRE CENTER
Fire Training, NWCG Development Unit
Susan Hickman
Jan Hendrick

We appreciate the efforts of those people associated with the development and review of this package.

Sponsored for NWCG publication by the NWCG Training Working Team, February, 2004.

Comments regarding the content of this publication should be directed to:

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Fire Training
3833 South Development Avenue
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Additional copies of this publication, NFES #1532 may be ordered from:

National Interagency Fire Center
ATTN: Great Basin Cache Supply Office
3833 S. Development Avenue
Boise, Idaho 83705.

I. GENERAL

Obtain and Assemble Materials Needed for Kit.

Kit will be assembled and prepared prior to receiving an assignment. Kit will contain critical items needed for functioning during the first 48 hours. Kit will be easily transportable and within agency weight limitation. Web gear or briefcase (not both) should not exceed 20 pounds.

- Proof of incident qualifications (Red Card)
- Position task book, NFES 2352
- Fireline Handbook, PMS 410-1, NFES 0065
- National Fire Equipment System Catalog, NFES 0362
- Interagency Incident Business Management Handbook, NFES 2160
- Interagency Standards for Fire and Aviation Operations (Red Book)
- Base/Camp Manager job aid, NFES 1532

Documentation Forms:

- ICS 213, General Message, NFES 1336
- ICS 214, Unit Log, NFES 1337
- SF-261, Crew Time Report, NFES 0891 and/or OF-288 Emergency Firefighter Time Report, NFES 0866
- OF-297, Emergency Equipment Shift Ticket, NFES 0872
- Agency specific forms

Miscellaneous Items (optional):

- Assorted pens, pencils, felt tip markers, highlighters, thumb tacks, string tags, pads of paper, clipboard, masking/strapping tape, duct tape, envelopes, hole punch, etc.
- Calculator
- Flashlight (extra batteries)
- Alarm clock
- Camera
- Surveyor flagging
- Tape measure
- Insect repellent
- Local area maps
- Road atlas
- Grid sheet 1/4" (8 1/2" x 11"), 1" (20" x 24")
- Adhesive, stick on, numbers
- Cell phone or calling card

II. MOBILIZATION

A. Obtain Complete Information from Dispatch Upon Initial Activation.

1. Obtain a copy of the order form which contains:

- Incident/Project name
- Incident/Project order number
- Office reference number (cost code)
- Descriptive location/ response area
- Legal location (township, range, section)
- Incident frequencies (if available)
- Incident base/phone number (contact)
- Request number
- Reporting date/time and location, e.g., Incident Command Post (ICP)
- Transportation arrangements and routes
- Special instructions

Retain a copy of this order form for your personal incident experience record.

2. The individual will have:

- Frameless soft pack containing personal gear, not to exceed 45 lb.
- BCMG kit, not to exceed 20 lb.
- Proper Personal Protective Equipment (PPE) for the job

B. Gather Information.

Gather all available information necessary to accurately assess incident; make appropriate decisions about immediate needs and actions including:

- Type of incident
 - Planned operations, e.g., multiple remote camps, burnout operations, water handling operations
- Current situation status
- Expected duration of incident
- Terrain
- Weather (current and expected)

III. INCIDENT ACTIVITIES

A. Arrive at Incident and Check In.

- Locate supervisor, (facilities unit leader; FACL).
- Report to status check-in recorder.
- Report to the finance/administration section for time keeping procedures.

B. Obtain Briefing from FACL.

You are responsible for asking adequate questions that will allow satisfactory completion of all job aspects. *There are no stupid questions.* Briefing should include as a minimum:

- Names of key incident personnel.
 - Incident Commander (IC), logistics section chief (LSC), agency representative, resource advisor, equipment and personnel time recorder, supply, ground support, food and medical unit, human resource specialist (HRSP), crew representative (CREP), etc.

- Names of key off incident personnel
 - Public works, land owners, contractors, law enforcement agencies, utility companies, etc.
- Established priorities for incident facilities.
 - Set up of maintenance, sanitation, safety items.
 - Determine needs for any off base incident facilities.
- Identified needs of incident personnel for facility establishment.
 - Showers and sanitation
 - Sleeping and eating arrangements
 - Handicap access
 - Dust abatement
 - Supply and ground support
 - Security
- Current and expected resource commitments.
 - Numbers of personnel
 - Types and numbers of equipment and aircraft
- Phone, radio, contact procedures.
 - On and off incident
- Jurisdictional agency(s).
 - Federal, state, local or multiple jurisdiction

- Work schedule.
 - Day/night operational periods
 - Relief personnel
- Policies and operating procedures.
 - Contractual agency requirements
 - Land owner requirements
 - Health and safety guidelines, Occupational Safety and Health Administration (OSHA)
 - Inmates
- Cultural, environmental and Threatened and Endangered species (T&E) concerns.
 - Archeological/historical sites
 - Restrictions
 - Fisheries and riparian areas
 - Plants and animals
- Proper ordering procedures.
 - Authorization for ordering equipment, supplies, and personnel.
 - Orders to be approved by the FACL prior to placing with supply?

- Safety concerns.
 - Hazardous materials
 - Traffic patterns
 - Sanitation
 - Weather
 - Lighting
 - Electrical
 - Health concerns
 - Elemental concerns, e.g., bears, snakes, poisonous plants.
- Supervision.
 - Chain of command
 - Resources assigned
- Location of incident facilities (private/agency).
 - Agency developed or undeveloped
 - Is a land use agreement in effect on private land?
- Request a current copy of the Incident Action Plan (IAP) and incident map.

C. Obtain Necessary Resources and Supplies.

Coordinate with FACL to determine the necessary incident facility staffing level, needed supplies and materials and obtain through proper channels.

- Portable toilet requirements
 - One portable toilet per 10 to 12 people with one service per day minimum.
 - Additional toilets may be required for the helibase, staging areas, and environmentally sensitive areas. It may be important to find out the hosting agency's requirements for sewage disposal.
- Potable water
 - Source location
 - Number of transports needed
 - Location of drinking sites
 - Contact the FACL, food unit leader (FDUL), or Contracting Officer (CO) for questions concerning potable water providers.

- Grey water
 - Shower, kitchen, wash stations (not sewage)
 - Approved disposal sites
 - Enough hauling capacity to keep up with demand. Is there a need to order another grey water truck?
- Garbage

Large dumpsters centrally located at kitchen, helibase, supply, base, remote camps. Adequate hauling capacity and distribution of garbage cans around all facilities.

 - Approved disposal site?
 - Restrictions on what the site will accept?
 - Dumping costs - contractor or incident responsibility?
 - Agency recycling program in place?
 - Secure from bears or bees?

- Remote camps
Camps vary greatly depending on access, agency requirements and number of people that are being supported. Obtain the following information which can help to determine the needs of the camp.
 - Ensure cultural, environmental, and T&E species concerns are considered when laying out camp site. Follow local standard operating procedures for these areas.
 - Ensure adequate water and rations are located at these sites. Coordinate with the FDUL for meals, delivery times, etc.
 - Ensure adequate communications with the ICP/incident base.
 - If bears or other such scavenging animals are in the area, place hard-sided trash receptacles in a central location within the camp area and remove contents on a daily basis.

- Warn the assigned personnel not to take food items to their sleeping areas if these animals are in the area.
- Order tents, tent flies or other such material and construct a structure that will allow individuals to get out of the weather. Ensure adequate shelter has been stockpiled at the camp location.
- Consider assigning an emergency medical technician (EMT) to camp.
- Order camp help to support camp operations.

See Appendix A for sample 50 person camp item inventory list and Appendix B for additional information on managing remote camps.

- Continually check for excess equipment and supplies in the camp area.
 - Consider demobilization of excess items.

D. Coordinate with FACL and Other Incident Personnel to Establish Incident Facilities.

- Provide incident facility map and signs.

See Appendix C, Facilities Map, example.

- Ground support and supply should be located as close to the entrance of camp as possible.
- Locate check-in at the camp entrance.
- Toilets and trash receptacles located in areas of heavy foot traffic and around crew sleeping areas.
- Showers and medical unit close to crew sleeping areas.
- ICP located away from main foot and vehicle traffic.
- Hand washing station in proximity to eating area and portable toilets. Assess the need for additional handwashing stations as the camp enlarges.
- Ensure area is big enough to expand the camp if necessary.

- Post area with signs for easy identification of specific functional areas, e.g., crew and overhead sleeping areas. Post identification tags on the tents of crew boss, unit leaders, etc. for quick identification.
- Plan the camp so that little or no vehicle traffic is in the main part of the camp. Limit vehicle traffic to service vehicle, e.g., gray, black, potable water.

See Appendix D, Crew Location Map, example.

- Provide safe traffic/personnel flow.
 - Use signs, ropes, traffic cones, barricades, flagging to control vehicle and foot traffic. Attempt to provide “one-way” traffic flow to prevent congestion.
 - Coordinate with ground support and security.
- Contact units for functional needs and location.

See Appendix E, Functional Needs Checklist.

- Coordinate with the different functions for space, power, shelter, trash and communication needs, e.g., phone lines.
- Establish day/night sleeping areas.
 - Ensure the day sleeping areas are sheltered and away from noise, e.g., generators, tool sharpening area.
 - Clearly identify crew locations and post visible signs.
 - Coordinate with security for patrols of the sleeping areas.
 - Limit vehicle traffic in the sleeping areas.
- Centrally locate electrical unit.
 - If possible order a large generator (50 KW) with a power distribution panel and correctly wired. If electrical outlets are to be installed at the base/camp, a certified electrician must do the installation.
- Catering and shower units.
 - Centrally located

- Inmate crews on the incident.
 - Consider sleeping and showering arrangements.
 - Discuss with the inmate liaison.
- Plan for contingency, such as wet weather, equipment breakdown, fire behavior, inversions.
 - Be aware of weather forecasts. Talk to locals about weather events for the area.
 - Have extra supplies on hand, e.g., shelter material, sleeping bags, fire resistant clothing, heaters, in case of foul weather.
 - Plan for evacuation or protection of base/camp in case of threatening change in fire behavior or weather.

See Appendix F for tips on Base Camp/ICP management.

- E. Communication with FACL, Incident Personnel, and Subordinates.
- Discuss daily work schedule and priorities with FACL.
 - Keep FACL informed on changes, personnel matters, contract disputes, work load or other significant situations.
 - Maintain inter/intra unit communication.
 - Know the chain of command and ordering procedures.
 - Maintain contacts with all sections or functions for determining needs or problems as related to the facilities.
 - Check-out a logistics net radio if needed.

F. Supervision of Incident Facility Personnel.

See Appendix G, Base Organization, example and Appendix H, Camp Organization, example.

- Develop work schedules.
 - Establish guidelines and procedures, i.e., who directly supervises members of the camp crew.
 - Establish time frames for trash/litter pickup, generator fueling, portable toilet servicing, grey water pumping, dust abatement.
 - Time frames for meal delivery, feeding times, ice deliveries, and cold drink stocking should be established and coordinated with the FDUL.
 - Monitor camp functions and anticipate scheduling problems. Adjust schedule as needed.
 - Adhere to agency established work/rest guidelines.

- Establish priorities for work assignments.
 - Establish guidelines and procedures.
 - Prioritize unscheduled work assignments, e.g., unloading of a supply truck, maintenance and inspection of facility, assisting food unit.
- Comply with Equal Employment Opportunity (EEO) guidelines.
 - Ensure compliance with all applicable EEO regulations.
 - Coordinate with the HRSP if problems arise deal with them, do not let them get worse.
 - Be aware of cultural differences between ethnic groups. Contact the CREP for any special needs that their crew may have.
- Keep individuals informed of incident status.
 - Communicate one on one, by group meetings, and/or through written information.

- Evaluate performance of subordinates as required by incident policy.
 - Be fair and honest in your evaluation. Ensure guidelines and procedures are adequately presented and understood by your subordinates.

G. Ensure Compliance with all Applicable Health and Safety Regulations.

- Coordinate with safety officer (SOF) and FACL.
- Obtain local government guidelines and regulations.

See Appendix I, Safety-Health Evaluation, checklist.

H. Provide Operation and Maintenance for all Facilities and Associated Equipment.

- Establish priorities and schedules for daily maintenance and service of incident facility installations, e.g., toilets, trash, generators, dust abatement, bulletin boards, office spaces.
- Provide daily inspections of all facilities and improvements for safety and health conditions.

- I. Coordinate with Finance/Administration Section and FACL on Incident Facilities, Contract/Agreement for Services, Equipment, and Personnel.
 - Maintain shift tickets for all assigned services equipment per contract/agreement.
 - Ensure that all information is transcribed correctly from the rental agreement to the shift ticket and all times, mileage and remarks are documented. Include the “E” number somewhere on the form.
 - Information that you will need for filling out the OF-297, Emergency Equipment Shift Ticket can be found on the OF-294, Emergency Equipment Rental Agreement. The contractor should have a copy; if not check with the procurement unit.
 - Retain copies of all shift tickets of the contractors you are administrating, for your personal files.

- Ensure all non-agency services and equipment have current contracts/agreements and have been inspected. Coordinate with ground support for equipment inspections.

See Appendix J, Emergency Equipment Shift Ticket, example and Appendix K, Emergency Equipment Rental Agreement, example.

J. Maintain ICS 214, Unit Log.

- ICS 214 will be kept current, legible, and document all major activities.
 - It may not be a requirement of this position to complete a ICS 214 for every operational period, but it is a good idea to document significant events, especially contractual and personnel problems.
 - A diary should be kept for documentation purposes and the ICS 214 is an excellent document for this purpose.

IV. DEMOBILIZATION

A. Identify Excess Resources and Supplies.

- Provide the FACL with a listing of excess incident facilities personnel and equipment. The listing will include who and what is excess, and time and date when excess. The list will be reviewed daily for accuracy. This can be documented on an ICS 213, General Message and submitted to the demobilization unit.
 - During demobilization the workload of the BCMG will increase.
 - Manage personnel release to ensure enough workforce is available for demobilization activities.
 - Ensure proper rehabilitation has occurred prior to the release of resources. Leave area in better condition than upon arrival.
 - Notify contractors of the impending release schedule.

- B. Coordinate the Release and Return of Facilities and Equipment with FACL and Finance/Administration Section.
- Ensure payment documents are finalized and submitted to the finance/administrative section.
 - Ensure that time for subordinates and equipment is turned in to finance/administration; evaluations of subordinates are turned in to documentation; capitalized equipment returned to supply.
 - Coordinate with ground support for the release inspection of contractor equipment.

APPENDIX A EXAMPLE 50 PERSON CAMP

<i>The following should supply 2 crews plus overhead This list does not include meals provided by the base camp.</i>					
1.	Bag, garbage, NFES 0021	1 BX	21.	Kit, Coffee, NFES 0480	1 KT
2.	Bag, sleeping, NFES 0022	50 EA	22.	Kit, lighting, multi-light cord, NFES 6051	1 KT
3.	Basin, wash, NFES 0027	10 EA	23.	McLeod, w/sheath, NFES 0296	4 EA
4.	Battery, size AA, NFES 0030	12 PG	24.	Meals Ready to Eat (MRE), NFES 1842	25 BX
5.	Battery, size D, NFES 0033	12 PG	25.	Pad, sleeping, NFES 1566	50 EA
6.	Bleach, gallon	1 EA	26.	Pen, black, NFES 0365	12 EA
7.	Burlap bag	1 BDL	27.	Portable toilet	3 EA
8.	Canteen, 1 QT. Disposable, NFES 0038	25 EA	28.	Pulaski, w/sheath, NFES 0146	4 EA
9.	Chest, ice, 48 qt., NFES 0557, w/ice	4 EA	29.	SF-261, Crew Time Report	1 BK
10.	Container, 5 gallon, plastic, NFES 0048, w/water	25 EA	30.	Sheeting, plastic, 16' x 100', NFES 0143	2 RO
11.	Cord, nylon shroud, NFES 0533	1 SL	31.	Shovel, w/sheath, NFES 0171	4 EA
12.	Dish Pan, 18 "	2 EA	32.	Soap, dish, 16 oz.	1 EA
13.	Envelope, brown, 9 1/4" x 12 ", NFES 0766	10 EA	33.	Soap, hand, liquid, bottle	10 EA
14.	File, flat, NFES 0060	24 EA	34.	Table, folding, NFES 2698	2 EA
15.	First Aid Kit, 24-person, NFES 1604	1 KT	35.	Tag, shipping (blank), NFES 0216	100 EA
16.	Fly, sunscreen, 20' x 20', NFES 6131	2 EA	36.	Tank, propane, 20 lb., NFES 0491	2 EA
17.	Gas can, 5 gallon w/gas	1 EA	37.	Tape, duct, NFES 0071	10 RO
18.	Generator, 3- KW, NFES 0709	1 EA	38.	Tape, filament, NFES 0222	10 RO
19.	Headlamp, NFES 0713	10 EA	40.	Toilet paper	20 RO
20.	Kit, chainsaw, NFES 0340	1 KT	41.	Towel, paper, two ply, NFES 0240	1 BX
SUPPLEMENTAL FOOD AND RELATED ITEMS (Coordinate with FDU on food related items)					
	Aluminum foil			Peanut butter and jelly	
	Bread/bagels			Salt and pepper	
	Butter			Sandwich bags/storage bags	
	Can openers			Serving utensils and serving gloves	
	Cereal			Snacks	
	Fruit			Steak sauce	
	Hot Chocolate			Sugar and creamer	
	Instant oatmeal			Sweet rolls	
	Jalapeños/hot sauce			Tea	
	Milk			Coffee	

APPENDIX B

Remote Camp Management Tips

Spike Camp 101

In the course of your availability as a BCMG you may find yourself in the position of filling an order as a remote (spike) camp manager, or to staff a spike camp from the base camp you are currently working out of. If the spike camp is near or on the fireline, you will be required to have fireline qualifications, i.e., arduous fitness rating, fireline refresher training, PPE. In any case you will probably be managing a relatively small camp with the possibility of little or no direct supervision from the logistics section. The following is a list of things to consider and ask about *before* going out to camp.

How many people will occupy the camp? Who are they? Who is in charge of this area? How long does the operations section plan on using this camp? What is the location of the camp? What division of the fire? Is any one already there and are any supplies in place? How do they expect to supply your camp? What type of communication facilities will you have, e.g., radio, cell phone, land line, satellite phone? What is the weather forecast?

APPENDIX B, continued

Supply Methods:

- By road: Is there a road all the way to the camp and what is the condition of the road?
- By helicopter: Is there a helispot for landing or will the supplies be dropped in by long line only? Will you need helitack to manage the helispot and supply deliveries? By pack train, e.g., mules? What are the procedures for ordering?

Camp Logistics:

- What kind of place is it? Campground, lodge, scout camp, private land, wilderness area, improved or not improved?
- What types of facilities are already there? Are there agreements in place for the facilities? Do you need to sign any shift tickets?
- Restroom considerations: Portable toilets, out houses or what?
- What will be used for sleeping areas?

Food and Water:

- How do they plan to feed everyone? Hot Cans from base camp? MREs? Restaurants? Sack lunches?
If in Hot Cans, make sure the food has not been sitting in those containers for more than 4 hours. *If so, do not use.* Make sure sack lunches are freshly made.

APPENDIX B, continued

- Is there potable/non-potable water at the camp?
- If the camp is remote, supplied by trail or air, it is a good plan to have a reserve of food and water on hand, i.e., 2-4 days, 3 meals and 2 gallons of water per person, per day minimum.

Backhaul Realities:

- Transport method and recycle priorities will dictate how to bag up the trash. If by pack train, make the bags of trash smaller.
 - It is almost always better to have the crews separate cardboard and plastic from the trash. Cardboard can make a bag of trash very awkward to deal with, and most places can recycle cardboard. Some places will allow burning cardboard. Check with FACL and/or resource advisors.
 - Plastic water containers (jugs or cubies) should be compacted and taped together and/or bagged separately. Water bottles can be bagged separately for recycling.
 - Put the plastic trash bags inside of burlap sacks. This helps with keeping the bags small and easy to handle. The burlap sacks will work in sling nets much

APPENDIX B, continued

better than the plastic. The burlap also will keep the plastic trash bags from getting holes and attracting the wrong kind of attention (bears, dogs, etc.) or just making a mess.

- It is not always easy to get 100% cooperation on these trash issues, but mentioning these things at briefing will usually get good results.

Camp Help:

- Can you get help at your camp? Are camp crewmembers available? Are they qualified to work at your spike camp, i.e., fireline qualifications.
 - Some times the best help is within the crew living at you camp. Most crew bosses do not mind leaving a person in camp for a part/full day to help out.
 - Someone on the crew may have a sore knee or whatever that would be better off in camp. You may only need someone in the morning to help, and can join the crew later.
 - Many have chainsaw and helicopter qualifications you may put to good use.
 - Often, rotating in one crew helper from a different crew each day can work well when you need the help.

APPENDIX B, continued

Safety Concerns:

- Snags, bees, wild animals (if the camp is in bear country, it may change how things are done quite a bit), vehicle traffic, bad footing, the fire itself, weather, public contact.
- How well are the crews set up for camping out? If you are in a remote site with no facilities and the weather goes bad, some crew's gear may not hold up well. This is where extra plastic sheeting, tarps and sleeping bags come in handy. Most all crews will come out with sleeping bags and tents, but be prepared to help people keep warm and dry.
- An EMT is a good idea, especially if the camp is only accessible by air or walking trail. The condition of your camp will tell you a lot; give it a good inspection before setting up and monitor things as it goes.
- Talk daily to the overhead living at your spike camp to see how things are working out for them. Consult with the safety officer and the FACL regularly. Some incident management teams may have a person assigned as the "spike camp coordinator", especially if there is more than one remote camp on the incident. This person should be knowledgeable about remote camps and could be a great help to you.

APPENDIX B, continued

And finally.....

A spike camp may be just 2 crews for a couple of days in the wilderness or over 100 people in a nice drive up to a lodge with catered meals and all the facilities, and any variation in between. Adaptability and good planning are the keys. Start thinking about how to demobilize it while you are building it up. This will help construct the most efficient and cost effective camp while taking care of the personnel living there. Each one will be challenging in its own way and provide a very rewarding experience.

APPENDIX B, continued

Typical Remote Camp Daily Routine

If the spike camp is being supplied daily by helicopter or truck delivery the typical routine is as follows:

- 0500** Get up an hour before the crews. Start the water heater (coffee heating kit) and make coffee in a clean bucket (Hot Can). Have hot coffee and hot water ready for the crews when they get up. Arrange the breakfast serving area.
- 0600** Awaken crews. Organize breakfast serving.
- 0700** Obtain briefing from DIVS.
 - What is going to happen over the next 24 hours.
 - What you need to prepare for.
- 0800** Clean up camp area and arrange garbage boxes on cargo net (if using helicopter) for back haul. Be sure all garbage boxes are securely sealed with fiber tape.
- 0900** Make daily re-supply order.
- 1000** Radio communications section and place re-supply order for supply section and food unit.
 - Number of meals for dinner
 - Number of meals for breakfast
 - Number of lunches for next day
 - Supplies needed, e.g., batteries, toilet paper, water, first aid, chainsaw fuel.
 - Request garbage backhaul.
- 1100** Patrol camp and make needed improvements.

APPENDIX B, continued

Mid-day

Air support or ground support should make a garbage backhaul.

1600 Start heating water in coffee heating kit for crew bathing and making coffee.

1700 Expect delivery of food and supply order. Expect crews to start returning to camp. Make coffee in Hot Can. Prepare wash kits, soap, and paper towels for crew bathing.

1800 Organize dinner serving. Usually crewmembers are willing to help with meal serving. Be sure the serving line is set up and orderly. Servers must wash and wear serving gloves.

1900 Clean up camp and package garbage. If a vehicle is available, consider backhauling garbage.

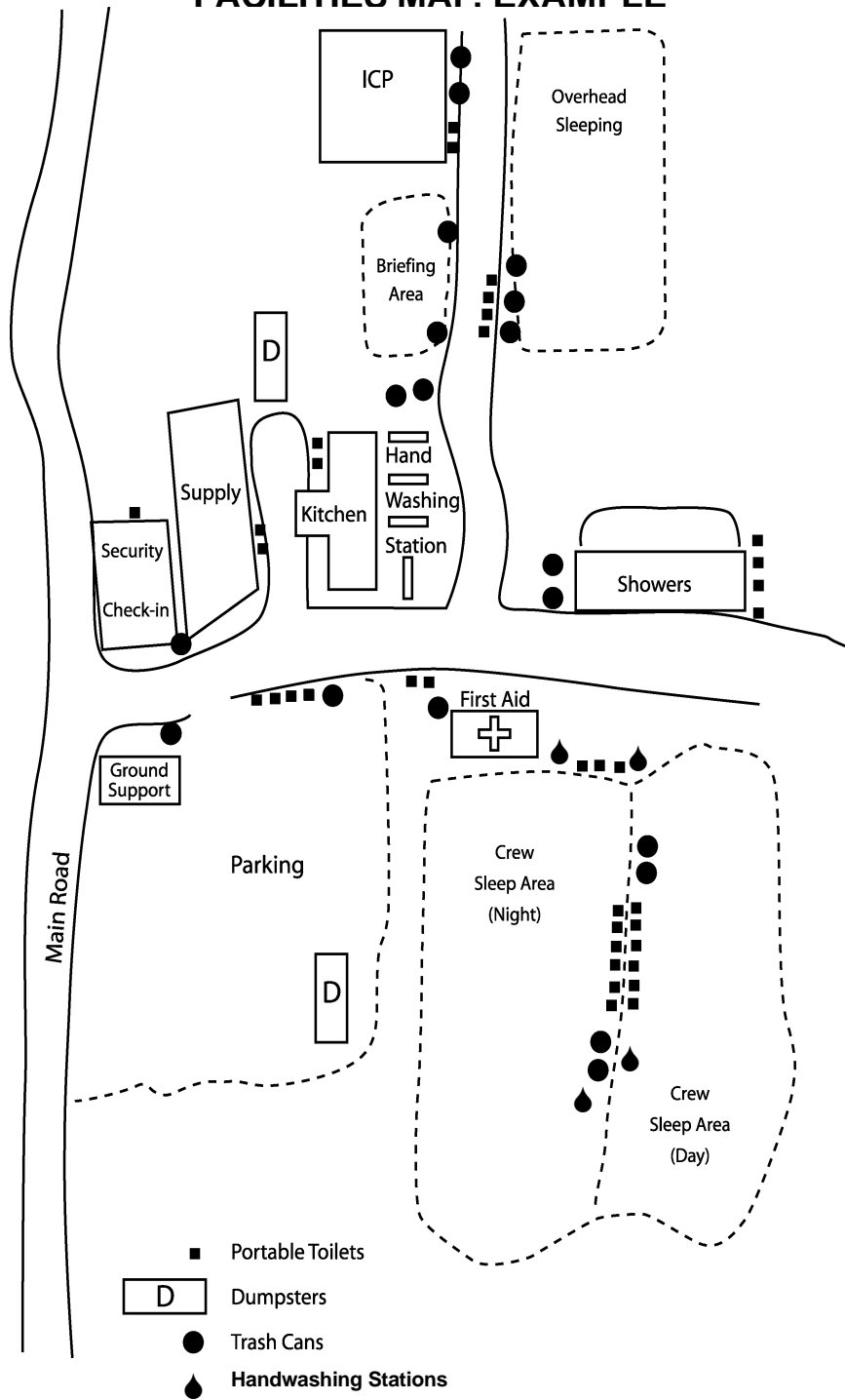
2000 Final inspection of the camp, and retire for the evening.

APPENDIX B, continued

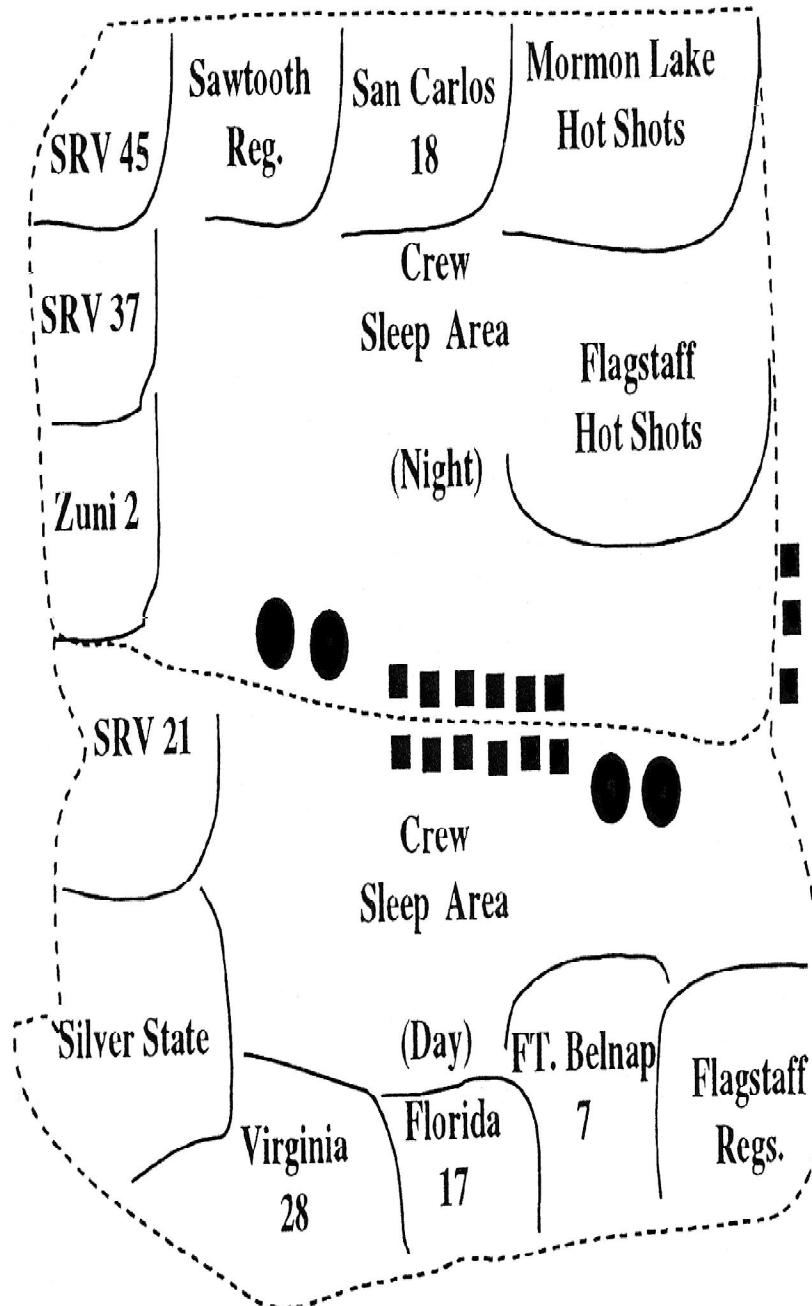
Tips:

- Provide for maximum crew comfort. Crews want to wash, eat, and sleep.
- Treat all crew with respect, be polite and upbeat, smile and add appropriate humor whenever possible.
- Gain the respect of all crews and overhead.
- Always be, one step ahead of every situation.
- Be aware of the camp's condition at all times.
- Use crewmembers to help with camp construction and chores. Most are willing to help.
- Never make coffee in the coffee heating kit. It is much better to have an abundant supply of hot water. Make coffee in a separate container.
- Keep noise to a minimum; avoid the use of generators.
- Plan for sudden storms and failed re-supply missions. Have shelter material, hot water, ample drinking water supply, a two day reserve of all supplies, and MREs.
- Keep DIVS informed of problems and the possible need to make changes that may affect them.

APPENDIX C FACILITIES MAP. EXAMPLE



**APPENDIX D
CREW LOCATION MAP, EXAMPLE**



APPENDIX E FUNCTIONAL NEEDS

Function	Needs	Location
Supply	Area large enough for tractor/trailer access and expansion, hazardous materials, power, telephone, personnel access, security, toilets, close to ground support, office spaces.	Close to ground support, main camp entrance
Ground Support	Parking area for large vehicles, fuel trucks, power, toilets, communications, office space	Close to main camp entrance
Medical Unit	Shelter for patient treatment, privacy, toilets, power, quiet area, communications, personnel and vehicle access.	Base/camp, easy access for crews, away from supply and/or ground support.
Kitchen Area	Large level area for tractor/trailer parking and access, potable water, 2 toilets for caterer, grey water disposal, dust abatement, dumpster, hand washing area.	Base/camp
Shower Unit	Level area, potable water, grey water disposal, tractor/trailer parking and access.	Base/camp
Facilities	Office space	Base, ICP
Security	Traffic cones, office space, power	Could collocate with ground support, near the entrance to the base/camp
Communications	Office space, power, lighting, heating/cooling, trash, camp crew help to secure phone lines.	Proximity to ICP
Plans	Office space, power with surge protection, lighting, heating/cooling, location for strategy meeting, briefing area, phone/data lines, trash receptacles, shaded area for check-in.	ICP
Finance/ Administration	Office space, power with surge protection, lighting, heating/cooling, dust free area for copier, trash receptacles.	ICP
Operations	Toilets, shade, power, dumpster, trash receptacles, shelter	ICP Note: Helibase should be located away from other facilities, foot and vehicle traffic.
Command and General Staff	Office space, meeting area, power, communications, lighting, heating/cooling, trash receptacles. Coordinate with Fire Information Officer concerning placement of information displays.	ICP

APPENDIX F

Base Camp/ICP Management Tips

The Base camp and Incident Command Post (ICP) are the center of activity on the incident. The complexity can be overwhelming and may require more than one BCMG. It is important to design the camp properly. A poorly laid out camp adds significantly to the management problems of the BCMG.

- Establish the sleeping area first. It must be in an area that experiences the least amount of noise from generators, refrigerator trucks, traffic, catering services, etc. It must have relatively easy access to showers, washstands, latrines and dining facilities.

- Establish the service area. This is the area that contains catering, showers, supply, medical, etc. This area needs easy access by service vehicles such as food supply, potable water, supply, gray water, portable toilet pumping trucks, etc. This area is normally quite noisy and should be located some distance from the sleeping area and close to access roads.

APPENDIX F, continued

- Establish a “down town” area. This is the area that contains the offices, briefing area, etc. It can be separate from the service area.
- Establish the vehicle parking area. This must be separate from the rest of the camp, but within easy walking distance to all areas within the camp.
- Lastly, establish the ground support area. This is usually some distance from the rest of the camp and near the access road. This area may contain the fueling service function.

APPENDIX F, continued

BCMG's schedule in the Base Camp and ICP:

Generally the BCMG should be up and on the job by 0500 and does not get to bed before 2200.

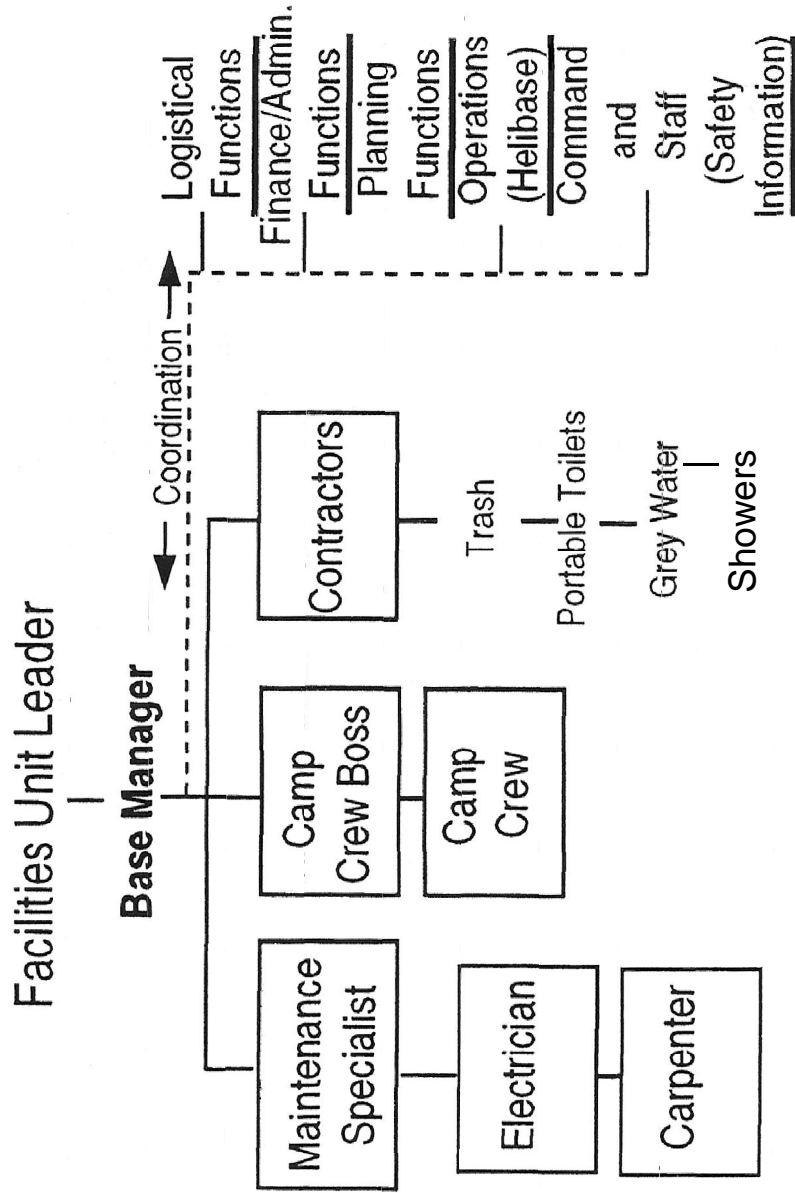
Camp Crews:

- The size of the camp crew should match the amount of work that needs to be done. Having too many camp crewmembers creates more problems than having too few.
- Always deal with the camp crew boss, not the individual crewmembers.

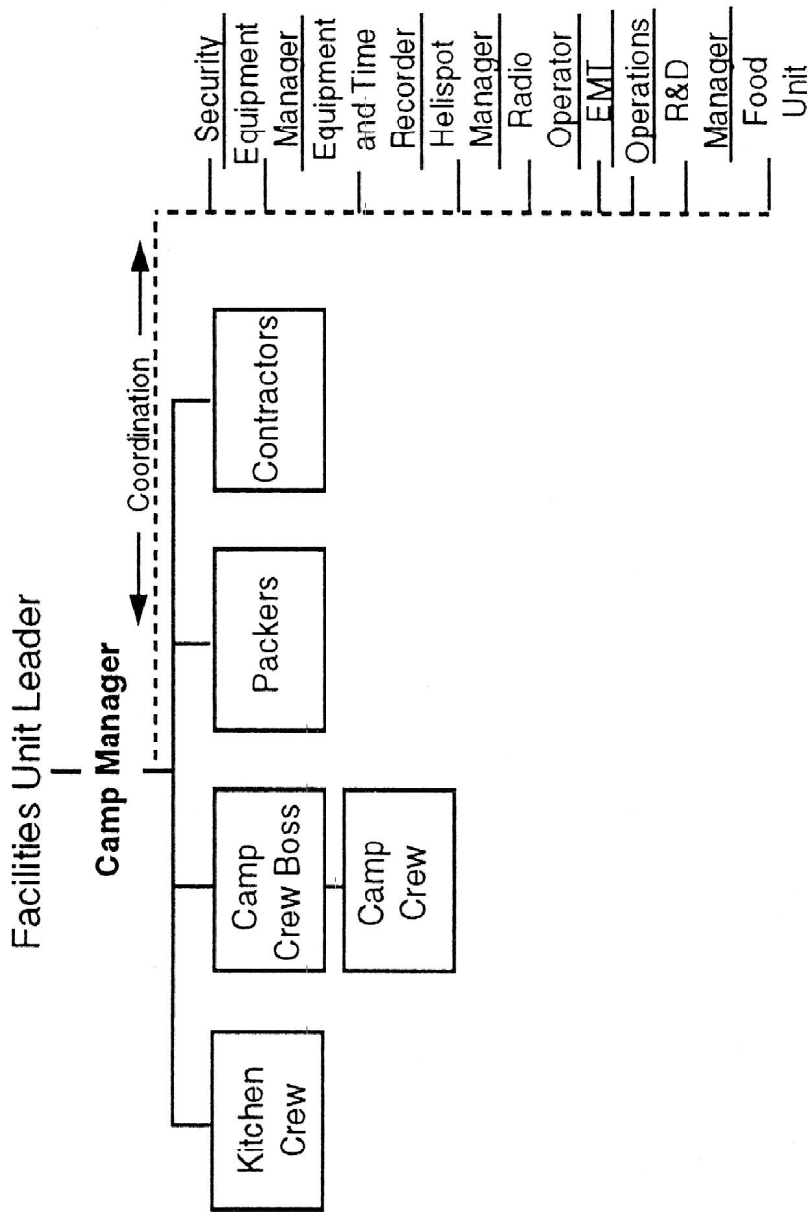
Tips:

- Schedule daily portable toilet pumping.
- Schedule portable toilets to be pumped at times that do not interfere with meal times or sleeping times.
- Use dust abatement services liberally.
- Continually patrol for safety hazards in and around the camp and mitigate the hazards promptly. Flag all tent ropes and hazards, control traffic flow, etc.
- Patrol the camp continually. Know the condition of the camp at all times.
- Address problems immediately.

**APPENDIX G
BASE ORGANIZATION, EXAMPLE**



APPENDIX H CAMP ORGANIZATION, EXAMPLE



APPENDIX I SAFETY-HEALTH EVALUATION

Safety is a supervisor's responsibility. You are responsible for detecting hazards and unsafe operating conditions and coordinating their correction, elimination or reduction. This evaluation is provided to assist you with the identification of unsafe actions, hazardous facilities, or other conditions which may cause an accident, injury, or decrease production.

S = Standard SS = Substandard		CONDITION	NOTES
1.	Location		
2.	Traffic flow. Ingress/egress provided (one-way traffic); traffic control signs, speed control - 5 mph.		
3.	Dust control and noise		
4.	Parking areas - adequate area; wheels chocked; security.		
5.	Sleeping areas - separated from parking; shade; signed (sleeping area - no vehicles allowed); sleeping only in designated areas; inmate and ward areas.		
6.	LPG tanks - downwind from ignition sources; no leaks; stored upright and firmly chained; "no smoking" signs; regulator secured; protected from moving vehicles; flex lines protected from traffic, located in shaded area.		
7.	Generators - one large centrally located if possible; location to minimize noise; cord condition; grounded; refueling shut down; exhaust exposure and spark arrestor; 10' clearance from flammable materials.		
8.	Wash area - soap, water, showers: area well drained.		
9.	Toilet facilities - clean condition; regular servicing.		
10.	Shower facilities - grey water disposal.		
11.	Status board - know safety hazards posted; weather posted; Identification and location of emergency medical units.		
12.	Lighting (night)		
13.	Electrical		
14.	Other		

APPENDIX J EMERGENCY EQUIPMENT SHIFT TICKET, EXAMPLE

EMERGENCY EQUIPMENT SHIFT TICKET					
NOTE: The responsible Government Officer will update this form each day or shift and make initial and final equipment inspections.					
1. AGREEMENT NUMBER 56-8173-6-0099		2. CONTRACTOR (name) Engine/Tenders INC.			
3. INCIDENT OR PROJECT NAME Campfire		4. INCIDENT NUMBER OR-DEF-0001	5. OPERATOR (name) Bob Forest		
6. EQUIPMENT MAKE Tender, Type 2		7. EQUIPMENT MODEL 1978 AUTCAR	8. OPERATOR FURNISHED BY <input checked="" type="checkbox"/> CONTRACTOR <input type="checkbox"/> GOVERNMENT		
9. SERIAL NUMBER ABC000011111		10. LICENSE NUMBER ABCD001	11. OPERATING SUPPLIES FURNISHED BY <input checked="" type="checkbox"/> CONTRACTOR (wet) <input type="checkbox"/> GOVERNMENT (dry)		
12. DATE MO/DAY/YR	13. EQUIPMENT USE HOURS/DAY/MILES (circle one)			14. REMARKS (released, down time and cause, problems, etc.)	
	START	STOP	WORK		SPECIAL
08/02/99	0600	1800	12		
08/03/99	0600	1800	12		
08/04/99	0600	1800	12		
08/05/99	0600	1800	12		
15. EQUIPMENT STATUS <input checked="" type="checkbox"/> a. Inspected and under agreement <input type="checkbox"/> b. Released by Government <input type="checkbox"/> c. Withdrawn by Contractor					
16. INVOICE POSTED BY (recorder's initials) DRG					
17. CONTRACTOR'S OR AUTHORIZED AGENT'S SIGNATURE Robert T. Forest			18. GOVERNMENT OFFICER'S SIGNATURE Dave R. Gomez	19. DATE SIGNED 08/05/99	

FINANCE

NSN 7540-01-119-5628
USDA/USDI

OPTIONAL FORM 297 (REV. 7-90)
USDA/USDI

APPENDIX K EMERGENCY EQUIPMENT RENTAL AGREEMENT, EXAMPLE

EMERGENCY EQUIPMENT RENTAL AGREEMENT

1. ORDERING OFFICE (name and address) USDA Forest Service, R-6 P. O. Box 3623 Portland, OR 97208		AGREEMENT NUMBER MUST APPEAR ON ALL PAPERS RELATING TO THIS AGREEMENT 2. AGREEMENT NUMBER 56-8173-6-0099 3. EFFECTIVE DATES a. beginning 01-01-99 b. ending 12-31-99					
4. CONTRACTOR a. name and address Engine/Tender INC. P.O. Box 365 In Oregon, OR 97365 b. EIN/SSN:		5. POINT OF HIRE (location when hired) Equipment location at time of hire.		6. THE WORK RATE IS BASED ON ALL OPERATING SUPPLIES BEING FURNISHED BY <input checked="" type="checkbox"/> CONTRACTOR <input type="checkbox"/> GOVERNMENT			
c. telephone number (day) 555-123-3456	d. telephone number (night) 1-800-123-3456	7. OPERATOR FURNISHED BY <input checked="" type="checkbox"/> CONTRACTOR <input type="checkbox"/> GOVERNMENT					
8. TYPE OF CONTRACTOR ("X" appropriate boxes) <input checked="" type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> LARGE BUSINESS <input type="checkbox"/> SMALL DISADVANTAGED OWNED <input type="checkbox"/> WOMEN OWNED <input type="checkbox"/> LABOR SURPLUS AREA <input type="checkbox"/> GOVERNMENT EMPLOYEE							
9. ITEM DESCRIPTION (include make, model, year, serial number and accessories)		10. NUMBER OF OPERATORS	11. WORK OR DAILY		12. SPECIAL		13. GUARANTEE (8 or more hours)
			a. rate	b. unit	a. rate	b. unit	
a. Tender, Type 2, 4x4, 3427 Gal. Model: 1978 AUTCAR Licence: ABCD001 Vin #: ABC0000011111		1	1,470.00	Day SS	2,520.00	Day SS	Under hire 8 or less hrs. 50% of daily rate.
b. Engine, Type 4, 4x4, 913 Gal. Model: 1995 Ford Licence: ZYXW123 Vin #: ZYX1234567891		3	2,086.00	Day SS	3,576.00	Day SS	Under hire 8 or less hrs. 50% of daily rate.
c.							
d.							
e.							
f.							
g.							
14. SPECIAL PROVISIONS 1. Required personnel per shift (Block 10): Type 6 and 7 engines require 1 ENGB and 1 FFT, Type 4 and 5 engine requires 1 ENGB and 2 FFT. Tender requires 1 tender operator per shift. 2. Terms and conditions of RFQ R6-03-004 are incorporated into this agreement with the same full force and effect as if given in full text. The contractor shall carry a complete copy of the RFQ and make it available upon request. 3. Claims may be submitted to the Procurement Unit Leader or Incident Agency Contracting Officer. Contract dispute claims may be settled by any Contracting Officer actin within their authority and within any limits set by the incident agency. In the event a settlement cannot be reached, the Incident Agency Contracting Officer will make the written final decision, with a copy to the signatory Contracting Officer.							
15. CONTRACTOR'S OR AUTHORIZED AGENT'S SIGNATURE <i>Robert T. Forest</i>		16. DATE 01/10/99	17. CONTRACTING OFFICER'S SIGNATURE <i>Susan B. Jones</i>			18. DATE 01/10/99	
19. PRINT NAME AND TITLE Robert T. Forest, owner			20. PRINT NAME AND TITLE Susan B. Jones, Contracting Officer				

NSN 7540-01-121-8825
PREVIOUS EDITION NOT USABLE

OPTIONAL FORM 294 (REV.8-90)
USDA/USDI
50294-104

COPY 2-ORDERING OFFICE FILE COPY

**APPENDIX L
24-HOUR CLOCK**

<i>12 Hour</i>	<i>24 Hour</i>	<i>Pronounce</i>
1:00 PM	0100	Zero-one hundred
2:00 AM	0200	Zero-two hundred
3:00 AM	0300	Zero-three hundred
4:00 AM	0400	Zero-four hundred
5:00 AM	0500	Zero-five hundred
6:00 AM	0600	Zero-six hundred
7:00 AM	0700	Zero-seven hundred
8:00 AM	0800	Zero-eight hundred
9:00 AM	0900	Zero-nine hundred
10:00 AM	1000	Ten hundred
11:00 AM	1100	Eleven hundred
12 NOON	1200	Twelve hundred
1:00 PM	1300	Thirteen hundred
2:00 PM	1400	Fourteen hundred
3:00 PM	1500	Fifteen hundred
4:00 PM	1600	Sixteen hundred
5:00 PM	1700	Seventeen hundred
6:00 PM	1800	Eighteen hundred
7:00 PM	1900	Nineteen hundred
8:00 PM	2000	Twenty hundred
9:00 PM	2100	Twenty-one hundred
10:00 PM	2200	Twenty-two hundred
11:00 PM	2300	Twenty-three hundred
12 MIDNIGHT	2400	Twenty-four hundred

Notice that you add 12 to the PM time to get the first two numbers of the hour, e.g., 8 PM is twenty hundred ($8 + 12 = 20$).

APPENDIX M GLOSSARY OF TERMS AND ACRONYMS

For additional fireline terms, refer to Wildland Fire Terminology, PMS 205, NFES 1832

Accountable Property	Items with a purchase price of \$5,000.00 or more or items that the agency considers sensitive (cameras, chainsaws, items with property numbers).
A/C	Aircraft, fixed or rotor wing.
AD	Administratively Determined (rates and pay plan for emergency workers.)
AGL	Above Ground Level, altitude expressed in feet above the ground.
AIDS	Aerial Ignition Devices - usually refers to a ping pong ball machine or a helitorch.
Air Contact	Particular aviation resource to contact when reporting to a fire.
Air Show	Multiple aircraft over a fire, usually including air tankers.

APPENDIX M, continued

Air Tactical	ICS position within the operations section. Air Tactical Group Supervisor (ATGS), synonymous with air attack.
Advanced Technology Meteorological Unit (ATMU)	A weather data collection and forecasting facility consisting of seven modules, weighing a total of 116 pounds and occupying 13.8 cubic feet of space when transported. Requires a supplemental order of helium, procured locally.
Alumigel®	Jelly like substance produced by mixing gasoline and Alumigel® powder. It is then applied with a helitorch to ignite fires.
ALS	Advanced Life Support
ATA	Actual Time of Arrival
Air Tanker	Fixed wing aircraft capable of delivering fire retardant (liquid and foam).
ATD	Actual Time of Departure

APPENDIX M, continued

Av Gas	Fuel for aircraft with internal combustion engines (reciprocating engines).
Azimuth	The horizontal distance in angular degrees in a clockwise direction from the north point.
Back Haul	Excess supplies, equipment or trash returned from a location on an incident.
Base	The location at which primary logistical functions for an incident are coordinated and administered. There is only one base per incident, e.g., incident command post (ICP).
Backpack Pump	A collapsible backpack made of neoprene or high strength nylon fabric that carries approximately five gallons of water fitted with a hand pump. (bladder bag)
Bearing	Position of an object with reference to a point on a compass.

APPENDIX M, continued

Black Water/ Sewage Truck	Vehicle capable of pumping and hauling raw sewage to certified sewage treatment facility.
Booster Pump	An intermediary pump for supplying additional lift in pumping water uphill past the capacity of the first pump.
BDU	“ Battle Dress Uniform”, fire resistant pants
Casual(EFF)	An employee who is picked up temporarily for a fire emergency, see AD. Also referred to as Emergency Fire Fighter (EFF)
Chief of Party	Person in charge of passengers while traveling.
Clamshell	Reusable battery holder for King® radios. Holds 9 AA batteries. Listed as Holder, Battery, King®, NFES 1034.
Compressed Air Foam System (CAFS)	A generic term used to describe foam systems consisting of an air compressor (air source), water pump and foam solution.

APPENDIX M, continued

Commo	Communications
Consumable Property	Items that are expected to be consumed on the incident (batteries, MREs, canteens).
Coordination Center	Regional/Zone/State level center for mobilization of resources to incidents, etc. (dispatch)
Coupling, hose	A fitting on the end of a hose that connects the ends of adjacent hoses or other components of hose, e.g., male, female, quick connect, pin lug.
Coyote Tactics	A progressive line construction technique involving self-sufficient crews which build fire line until the end of the operational period, remain at or near that point while in an unavailable status and begin building fireline at that point at the start of the next operational period.
CSJRL	Cotton-Synthetic Jacketed, Rubber Lined hose.

APPENDIX M, continued

Cubie	Cubitainer: a five gallon container used for transporting drinking water.
Demob	Demobilization, process of removing resources, usually off incidents.
DHS	Department of Homeland Security
Dispatch	Dispatch center-a facility from which resources are assigned to an incident.
Division	Incident division, usually designated by a letter, e.g., Division A.
DJRL	Double Jacketed Rubber Lined hose.
Dozer	A tracked vehicle with a front mounted blade used for building fireline; bulldozer.
Dozer tender	Bulldozer service unit
Drum Lifter	A device used to transport a 55 gallon drum via a sling on a helicopter.

APPENDIX M, continued

Durable Property	Non-accountable items, with useful life expectancy longer than one incident.
Engine	A truck mounted with a pump and tank (water), used in fire suppression.
EMS	Emergency Medical Service
EMT	Emergency Medical Technician
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
ETE	Estimated Time En Route.
Expanded Dispatch	The organization in dispatch that is activated when the complexity of logistics coordination approaches a level the initial attack dispatch organization can no longer support.
FAA	Federal Aviation Administration
FBO	Fixed Base Operator; usually the local airport.

APPENDIX M, continued

Fill or Kill	Policy designed to indicate ability to fill an order or if it can not be filled within a reasonable amount of time (1 hour is standard), then “kill” it. Determine whether to reorder at a later time or cancel the order. This policy is referenced in the National Interagency Mobilization Guide.
Fire Cache	A supply of fire tools and equipment assembled in planned quantities or standard units at a strategic point for exclusive use in fire suppression.
Fixed Wing	Aircraft with stationary wings; an airplane.
FLE	Fire Line Explosives, used for rapid construction of fire line with a small number of specially trained personnel.
FMO	Fire Management Officer

APPENDIX M, continued

Foam	An extinguishing agent, chemically and/or mechanically produced, that blankets and adheres to the fuels to reduce combustion. When foam products are mixed at 1% or less, the foam will remain effective at preventing ignition for 12 hours. Works with current class A foam delivery systems.
Fol-da-tank®	A portable, collapsible water tank with a tubular frame; varies in capacity from 500-1500 gallons.
FTS	Federal Telephone System
Gated Wye	A gated valve used in hose lays to allow connection of other hoses within the trunk line, e.g., 1" lateral hose with nozzle.
GHT	Garden Hose Thread, 3/4 inch hose fittings
Gorman Rupp	Small, portable water pump.
Gray Water (Grey)	Used water from the kitchen and shower units.

APPENDIX M, continued

Greenwich Mean Time	The time at “0” longitude, Greenwich, England (Zulu time).
Hazardous Material	Substances that are identified, classified and regulated in the Code of Federal Regulations, Title 49 and Hazardous Materials Regulation 175. A hazardous material is a substance or material which has been determined by the Department of Transportation to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.
Head (water pressure)	Pressure due to elevation of water. Equals 0.433 pounds per square inch per foot of elevation.
Helibucket	Specially designed bucket carried by a helicopter like a sling load and used for aerial delivery of water or fire retardants.

APPENDIX M, continued

Helitorch	An aerial ignition device slung beneath a helicopter to disperse ignited lumps of jelled gasoline (Alumigel®).
Hot Food/ Drink Cans	Nonreusable cans that are used to ship hot or cold drinks and food to remote locations.
Hot Shots, IHC	Specially trained seasonal hand crew (type 1).
Hoverfill Tank	Large, portable tank from which helitankers can hoverfill.
IA	Initial Attack, first effort to suppress a fire.
IC	Incident Commander
Impeller	Rotating part of a centrifugal pump which imparts energy to the liquid to be moved. For shearing purposes, the impeller is on a rotating shaft within the body of liquid.

APPENDIX M, continued

IMSR	Incident Management Situation Report (Sit Report). Daily report giving the current fire situation in the United States.
Incident	An event (fire, flood, earthquake, other disaster)
Incident Command System (ICS)	An organization used to manage an emergency incident or a non-emergency event. It can be used equally well for both small and large situations. The system has considerable internal flexibility. It can grow or shrink to meet differing needs. This makes it a very cost-effective and efficient management system. The system can be applied to a wide variety of emergency and non-emergency situations.
Incident Action Plan (IAP)	Contains objectives reflecting the overall incident strategy and specific control actions for the next operational period. The plan may be oral or written.

APPENDIX M, continued

Incident Overhead	All supervisory positions described in the incident command system.
Increaser	Increasing coupling used on hose, pump or nozzles to permit connection of a larger size of hose.
Inductor	A control mechanism that allows a regulated quantity of foam concentrate to be introduced into the main hose line.
Infrared	A heat detection system used for fire detection, mapping and heat source identification.
Inside Diameter	The internal diameter of a tube, conductor or coupling as distinguished from the outside diameter. Fire hose sizes are classified by a nominal internal diameter.
IR Scan	Infrared survey of a fire

APPENDIX M, continued

Iron Pipe Standard Thread	Standard system of thread for connecting various types of rigid piping. These threads are much finer and more difficult to connect in the field than National Standard threads.
Kamlock	Type of fitting that provides quick connecting/disconnecting hose.
Lead Line	Line or set of lines made of rope, webbing or cable and used in helicopter external load operations. Placed between a swivel or the cargo hook and the load.
Lead Plane	Aircraft with pilot used to make trial runs over the target area to check wind, smoke conditions, topography and lead air tankers to the target.
Lined Fire Hose	Fire hose with a smooth inner coating of rubber or plastic to reduce friction loss.

APPENDIX M, continued

Liquid Concentrate	Liquid phosphate fertilizers used as fire retardants, usually diluted three to five times prior to application.
Live Line or Reel	Hose line or reel on a fire engine, carried connected to the pump, ready for use without making connection to pump or attaching nozzle.
Load Calculation Form	An agency form used to calculate helicopter load weight.
Local Agency	An agency having jurisdictional responsibility for all or part of an incident.
Longline	A line or set of lines, usually in 50 foot increments, used in external load operations that allow the helicopter to place loads in areas which the helicopter can not land.
MAC	Multi-Agency Coordinating Group

APPENDIX M, continued

MAFFS	Modular Airborne Fire Fighting System, the military's air tanker program (used when more tankers are needed than there are available on contract).
Mark III	Small, portable water pump
Mark 26	Portable water pump (smaller than a Mark III)
Medevac	Emergency medical evacuation
Misery Whip	Crosscut saw
MIST	Minimum impact suppression tactics
Mix Ratio	The ratio of liquid foam concentrate to water, usually expressed as a percent.
Monitor	Turret type nozzle usually mounted on an engine.
Mob Guides	Reference used to facilitate the mobilization of resources. Includes policies, procedures, and where to find the resources.

APPENDIX M, continued

Mopup	Extinguish or remove burning material near control lines after an area has burned to secure the fire or to reduce residual smoke.
MRE	Meals Ready to Eat, light weight, packaged food used on incidents.
Multicom	A VHF/AM aircraft radio frequency (122.9 MHz) assigned by the FAA for use in air-to-air communications.
Mud	Fire retardant
NH	National Fire Hose, coupling threads used for fire hose 1½” and larger.
NFES Catalog	Referred to as the National Fire Equipment System Catalog. This catalog is used to order equipment and supplies from fire caches.
NICC	National Interagency Coordination Center at Boise, ID.

APPENDIX M, continued

NIFC	National Interagency Fire Center at Boise, ID
Nomex®	A fire resistant synthetic material used in the manufacturing of flight suits, pants and shirts for firefighters.
Nozzle Aspirated Foam System	A foam generating device that mixes air at atmospheric pressure with foam solution in a nozzle chamber.
Nozzle, Forester	Twin-tip combination nozzle for 1” hose. Combination fog/straight stream nozzle tip; low volume.
Nozzle, KK	Combination barrel nozzle. Higher volume than the Forester nozzle.
NPSH	National Pipe Straight Hose Coupling Threads (straight pipe threads for hose couplings and nipple).
NPT	National Pipe Threads/American Standard Taper pipe threads

APPENDIX M, continued

NTE	Not to exceed; a personnel term used for positions that have a limited duration due to funding or project length.
Payload	Weight of passengers and/or cargo being carried by an aircraft.
PAX	Passengers
PC	Paracargo, cargo delivered by means of fixed wing aircraft and parachutes specially packed and rigged, usually by smokejumper paracargo specialists.
PG	Personal gear bag
Phoschek®	Long term red colored fire retardant
PIC	Pilot in Command
Piston Pump	Positive displacement pump with 2, 4, and 6 reciprocating pistons to force water from the pump chamber in conjunction with appropriate action of inlet and discharge valves.

APPENDIX M, continued

Potable Water	Certified sanitary water, suitable for human consumption.
Probeye®	Infrared scanning device that picks up hotspots on fires.
Proportioner	A device that adds a predetermined amount of foam concentrate to water to form a foam solution.
PSD	Plastic Sphere Dispenser - refers to a machine installed in a helicopter that dispenses plastic spheres (ping pong balls) filled with potassium permanganate. The machine injects a small amount of ethylene glycol into each sphere and then dispenses them out of the helicopter. The exothermal reaction of the two chemicals creates enough heat to ignite the plastic sphere, in 25 to 30 seconds, which in turn ignites the fuel bed. Aerial Sphere Dispenser Kit, NFES 3410

APPENDIX M, continued

PTO	Power Take-Off, a supplementary mechanism enabling the engine power to be used to operate non-automotive apparatus (such as a pump).
Pumpkin	Collapsible, soft-sided, freestanding portable water tank.
Ramp	Parking area for aircraft adjacent to a runway.
Red Card	Fire qualification card issued to personnel showing their qualifications to fill specific fire positions.
Reel	A frame on which hose is wound (.75 to 1 inch hose) supplied by a water tank on the apparatus.
Resource	Any person, aircraft, supply or equipment available for assignment to an incident. Described by kind and type, e.g., T2 Crew, ICT1, T6 Engine.

APPENDIX M, continued

Resource Order	Form used by dispatchers, service personnel and logistics coordinators to document the request, ordering or release of resources and the tracking of those resources on an incident.
Respirator	A simple filter mask for individual protection against smoke and fumes for use on wildland fires.
Retardant	A chemical having a retarding action on fire, usually applied with an air tanker.
Retrograde	Reversal of an order; shipping supply items from the incident back to the cache or to another incident.
Requisition	A form/procedure for purchasing supplies.
RH	Relative Humidity, a measure of moisture in the air.

APPENDIX M, continued

Rocker Lug Coupling	Hose coupling in which the lugs used for tightening or loosening are semicircular in shape and designed to pass over obstructions.
Rotor Wash	The air turbulence caused by the movement of the rotor blades of a helicopter.
Rotorwing	Aircraft with a rotor system that rotates about an axis to provide lift and/or thrust for a helicopter.
RX	Prescribed fire
SIPT	Straight Iron Pipe Thread
Slurry	Fire retardant
SMJ or SJ	Smokejumper; fire suppression personnel who parachute to fires via fixed wing aircraft.
SOP	Standard Operating Procedures
Spotter	Smokejumper supervisor in charge of a jumper load; performs navigation, communication and paracargo duties.

APPENDIX M, continued

Stocking Levels	Minimum levels of supplies kept on hand at a fire cache.
Strainer	A wire or metal guard used to keep debris from clogging pipe or other openings made for pumping water. Placed on suction hose it will protect pumps from foreign materials.
Surfactant	A surface active agent. A formulation which, when added to water in proper amounts, will reduce the surface tension and increase penetration capabilities of the water, e.g., wet water, class A foam, soap.
Swamper	Assistant to an equipment operator
T&A	Time and Attendance
Tail Number	FAA number used to identify aircraft, located on the tail of the ship. American aircraft tail numbers begin with the letter N, e.g., N543TY, N67344.
Tanker	Air tanker

APPENDIX M, continued

TFR	Temporary Flight Restriction. This airspace restriction is obtained through the FAA. It is an area of airspace over an incident that is defined both (laterally and vertically) which has been temporarily or partially closed to nonessential aircraft for a specific period of time.
Thread	The specific dimensions of screw thread employed to couple fire hose and equipment. American National Standard Hose Thread has been adopted for fire hose couplings.
Torch, Drip	A hand-held device for igniting fires by dripping flaming liquid fuel on the materials to be burned. Fuel used is generally a mixture of diesel and gasoline.
Trash Pump	Medium sized pump used for moving large amounts of liquids, e.g., grey water, retardant. These pumps are ordered as volume pumps.

APPENDIX M, continued

UTF	Unable to fill; pertaining to resource orders.
Water Buffalo	Liquid storage unit
Water Tender	Ground vehicle capable of transporting specified quantities of water, e.g., Type 1 water tender; 5000 gallon capacity, 300 gallon per minute pumping capability.
WFSA	Wildland Fire Situation Analysis. An analysis tool used to determine the most appropriate management strategy for a wildfire that has escaped initial attack.
WX	Weather
Xedar®	Type of heat seeking video display unit that identifies hot spots during mopup.
100 hour	Mandatory maintenance done to aircraft every 100 hours (there is also a 50 hour, 1000 hour, etc.)