

# Crew Boss (Single Resource) S-230



NFES 2810

**Instructor Guide**

**NOVEMBER 2004**



## CERTIFICATION STATEMENT

on behalf of the

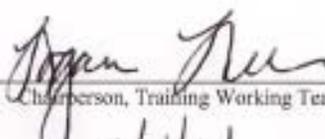
### NATIONAL WILDFIRE COORDINATING GROUP

*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:*

Crew Boss (Single Resource), S-230  
Certified at Level I

This product is part of an established NWCG curriculum. It meets the COURSE DEVELOPMENT AND FORMAT STANDARDS – Fifth Edition, 2001 and has received a technical review and a professional edit.

  
\_\_\_\_\_  
Member NWCG and Training Working Team Liaison  
Date 11/11/04

  
\_\_\_\_\_  
Chairperson, Training Working Team  
Date 11/8/04



**S- 230**

**CREW BOSS (SINGLE RESOURCE)**

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thickness of book.

# Crew Boss (Single Resource)

## S-230

### Instructor Guide

#### NOVEMBER 2004

#### NFES 2810

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Comments regarding the content of this publication should be directed to:  
National Interagency Fire Center, Fire Training, 3833 S. Development Ave., Boise, Idaho 83705.  
E-mail: [nwgc\\_standards@nifc.blm.gov](mailto:nwgc_standards@nifc.blm.gov).

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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 2810.

**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](mailto:nwcg_standards@nifc.blm.gov). Materials submitted will be evaluated and, where and when appropriate, incorporated into the appropriate courses.

**Course Length for NWCG Courses**

If a course is available through PMS the *recommended* course hours and the "NWCG Position on Course Presentation and Materials" will be adhered to by the course instructors.

If the course is not available through PMS, e.g., L-380, and has been developed using NWCG course criteria, *minimum* course hour requirements have been established and must be adhered to by the course developer and the course instructors.

Course hours for all NWCG courses can be found online in the Field Manager's Course Guide: <http://www.nwcg.gov/pms/training/fmcg.pdf>. If the hours are a minimum versus recommended they will be stated as such.

## **PREFACE**

Crew Boss (Single Resource), S-230 has been developed by an interagency development group with guidance from the National Interagency Fire Center (NIFC), Fire Training under the authority of the National Wildfire Coordinating Group (NWCG). The development group consists of the following representatives:

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## COURSE INTRODUCTION

**This section contains instructions and information essential to the instructor in making an effective presentation. All instructors must be thoroughly familiar with this section and all other course material prior to presenting the course.**

### I. COURSE DESIGN

Crew Boss (Single Resource), S-230 is a 24-32 hour course designed to meet the training needs of a Crew Boss on an incident as outlined in the Wildland Fire Qualification System Guide, PMS 310-1, and the Position Task Book (PTB) developed for the position.

The Wildland Fire Qualification System Guide, PMS 310-1 provides guidance and a national wildfire standard for establishing minimum training, skills and knowledge, experience, and physical fitness requirements for the participating agencies of the National Wildfire Coordinating Group.

The instructor guide contains all information and references necessary for the course coordinator, instructors, and students. The course instructions contain information concerning course administration. Subject material is presented in units of instruction. Exercises in the units are designed to demonstrate procedures. Reference material is provided to assist students in the classroom and on the job.

The course units and lessons provide introduction to operational leadership, mobilization, arrival at the incident, risk management, entrapment avoidance, safety and tactics, off line duties, demobilization, and post-incident responsibilities.

The material in this course is designed to be presented through a series of facilitated discussions and classroom exercises, including tactical decision game exercises. Instructors must devote adequate time for their presentations and should draw from their experiences to add realism and credibility to the information provided. The instructors must work through the exercises together and agree upon the solutions. The instructors should also review the final examination to ensure that all material is covered.

Students will be formed into groups for the exercises in this course and intermixed according to experience level and geographic location of their home unit. Use the student profile the students submit from the pre-course work to aid in arranging groups. Due to the nature of the exercises in this course, seating should allow for ease of discussion and interaction between the students.

Lesson 4C, Exercise 7 is formatted as a tactical decision game. The lesson contains eight scenarios from across the United States. The cadre group can use one or all eight scenarios depending upon the size of the student group. The scenarios can be implemented by using the accompanying topographic maps or set up in a sand table environment.

Adequate space is needed so student groups will not be able to overhear adjacent scenarios. The lead instructor/course coordinator will need to ensure an adequate amount of facilitators are available for each scenario station. *See Lesson 4C, Exercise 7 for further instructions.*

## II. COURSE MATERIALS

See Appendix A for course material ordering information. This appendix contains information on course presentation materials that need to be ordered as well as support material and equipment.

### A. Instructor Materials

The Instructor Guide, CD-ROM, and video/DVD contain all the information needed for course presentation and list references for the course coordinator and instructors.

The CD-ROM contains complete copies of the Instructor Guide, Appendices, and Student Workbook in bookmarked files in portable document format (pdf). A bookmark is an electronic index to aid the reader in finding specific portions of the publication. To access the bookmark function, open the file and click on the bookmark tab.

Appendix C contains the unit quiz solutions, exercise solutions, and final examination. Appendix D contains pre-course work to be sent to the students prior to the beginning of the class. Appendix E contains the student course evaluations. These documents must be printed and provided to the students as indicated in each unit.

## B. Key to Instructor Materials

The Instructor Guide provides instructor notes to assist with teaching techniques and are presented in **BOLD CAPS** in the lesson plan.

The “Aids & Cues” column serves as a reminder to display or refer to specific lesson materials, such as Student Workbook page numbers.

The codes listed in the Aids and Cues column are as follows:

- IR – Instructor Reference
- SR – Student Reference
- EP – Electronic Presentation (PowerPoint)
- SW – Student Workbook
- HO – Handout
- VT – Videotape
- DVD – Digital Video Disk

## C. Student Workbook

Student Workbooks (NFES 2811) should be ordered prior to the beginning of the course, one for each student. An electronic version of the Student Workbook is located on the S-230 Course Materials CD-ROM under the file name: S-230\_Student Workbook.pdf.

## D. Sample Agenda

A sample agenda is located at the end of this course instruction. It is suggested that the time frames are not included in the agenda handed out to the students. The agenda can be inserted into the student workbook prior to the beginning of the class.

### III. INSTRUCTOR PREREQUISITES

Refer to the Field Manager's Course Guide (FMCG), PMS 901-1 for Instructor Prerequisites specific to this course. This guide is accessible at <http://www.nwccg.gov/pms/training/fmcg.pdf>.

This is a 200 level course. In addition to the course specific Instructor Prerequisites, unit instructors should have 32 hours of instructor training (Facilitative Instructor, M-410, or equivalent course). Lead instructors are required to have 32 hours of instructor training.

### IV. STUDENT TARGET GROUP

This course is required training for all personnel desiring to be qualified as a single resource boss. The concepts in this course are to be applied to all single resource boss positions, not just the Crew Boss of a hand crew.

### V. STUDENT PREREQUISITES

- Qualified as Firefighter Type 1 (FFT1).

### VI. STUDENT PRE-COURSE WORK

Pre-course materials to be sent to the students:

- Student profile form (completed form to be sent to the course coordinator or lead instructor prior to class).
- Pre-course work questionnaire (completed and brought to class).
- Incident Response Pocket Guide, NFES 1077 (reference for pre-course questionnaire).

All pre-course materials are located in Appendix D (except for the Incident Response Pocket Guide).

The pre-course materials should be mailed to students five weeks before they attend the course. The student is to submit the student profile form to the course coordinator or lead instructor prior to the beginning of the course. This will aid the instructors with placement of students into groups. Students are to bring the completed pre-course questionnaire to class for discussion.

## VII. COURSE SELECTION LETTER

See the Course Coordinator's Guide, PMS 907, for information on selection letters. This guide is accessible at <http://www.nwccg.gov/pms/training/PMS907.pdf>.

An example of the course selection letter is located at the end of this introduction section. This letter will accompany the student pre-course materials and explains time frames for submission of the student profile form, class start time, class location, etc.

## VIII. COURSE OBJECTIVES

Course objectives are stated in broad terms that define what the student will be able to accomplish after completing the course.

At the successful completion of this course students will:

- Describe Crew Boss responsibilities prior to and during mobilization, on the incident, and during demobilization.
- Identify the hazards and risks on various incidents and describe how to mitigate them.
- Describe tactics that are appropriate to various wildland fire situations and implement them through the chain of command.

## IX. RECOMMENDED CLASS SIZE

In order to facilitate group exercises, it is recommended that instructors maintain a maximum 6:1 ratio of students to instructors. This is to enable strong mentorship by the cadre to the students. Maximum class size is 30 students.

## X. SPACE AND CLASSROOM REQUIREMENTS

The classroom should be chosen and viewed well in advance of the presentation. The choice should be based on, but not limited to, the following characteristics:

- Provide adequate area for students and equipment.
- Be free from outside interruptions and interferences.
- Have controlled lighting.
- Have good acoustics.
- Have good ventilation.
- An area to accommodate the rotation of student groups through stations for the scenarios in Lesson 4C, Exercise 7.

Refer to the Course Coordinators Guide, PMS 907 for more information. This guide is accessible at <http://www.nwccg.gov/pms/training/PMS907.pdf>

## XI. EVALUATION

### A. Student Evaluation

Quizzes will be given for Units 2, 3, 5, and 6. Exercise solutions and quiz solutions can be found in Appendix C, Handouts. The students can use these solution sheets as study aids for the final examination.

Students must obtain 70% or higher on the final examination to receive a certificate of completion for this course.

A copy of the final examination is located in Appendix C, Handouts. The final examination answer key is located in Appendix E, Evaluations.

B. Course Evaluations

Copies of these forms are found in Appendix E, Evaluations.

1. Student Final Course Evaluation

This is an opportunity for students to comment on the course and the instructors for the purpose of improving future training sessions.

2. Training Course Evaluation

Comments are to be made on this form by the course coordinator and/or lead instructor then submitted to:

National Interagency Fire Center, Fire Training  
Standards Unit  
3833 South Development Avenue  
Boise, Idaho 83705-5354

or via email to: [nwcg\\_standards@nifc.blm.gov](mailto:nwcg_standards@nifc.blm.gov)

## XII. APPENDIXES

**The following appendix is included in this Instructor Guide:**

A. Appendix A - Course Material Ordering Information

A list of materials to be ordered is included in this appendix. Items include instructor guide, student workbook, CD-ROM with electronic presentations, and other materials that are provided in the National Fire Equipment System (NFES) catalog.

**The following appendices are located only on the S-230 Course Materials CD-ROM:**

B. Appendix B - Electronic Presentations

C. Appendix C - Handouts

D. Appendix D - Pre-Course Work

E. Appendix E - Evaluations

CREW BOSS, S-230  
SELECTION LETTER  
*EXAMPLE*

Congratulations on being selected to attend Crew Boss, S-230 to be held at (*location*). The course will begin at (*time, date*), and end at (*time, date*).

The primary emphasis of this course will be to prepare individuals for the position of Crew Boss (Single Resource).

**The following pre-course work is mandatory:**

Complete the student profile form and mail to the *course coordinator or lead instructor by Date*. Complete the pre-course questionnaire and bring it to class.

It is recommended that you bring the following items to class:

- Fireline Handbook (including Appendix B) PMS 410-1, NFES 0065
- Position Task Book for Single Resource Boss, NFES 2318
- Incident Response Pocket Guide, NFES 1077

If you desire to receive a certificate of completion for the course, please do not make travel arrangements to arrive after the scheduled start time or to depart prior to the scheduled course completion time.

In the event you cannot attend the course, please contact the course coordinator prior to the beginning of the class. This allows time for notifying personnel that may be on the waiting list to be contacted to fill the vacancy.

If you have any questions please contact the course coordinator, *Name, phone number, email*.



CREW BOSS, S-230  
AGENDA  
*EXAMPLE*

Day 1

0800	Unit 0 - Introduction
0900	Break
0915	Unit 1 - Operational Leadership
0945	Break
1000	Unit 2 - Mobilization
1100	Break
1115	Unit 3 - Arrival at the Incident
1215	Lunch
1315	Unit 3 - Arrival at the Incident, cont.
1415	Break
1430	Unit 3 - Arrival at the Incident, cont.
1530	Break
1545	Unit 4 - Lesson 4A - Risk Management
1700	End of Day 1

Day 2

0800	Unit 4 - Lesson 4B - Entrapment Avoidance
0900	Break
0915	Unit 4 - Lesson 4B - Entrapment Avoidance, cont.
1015	Break
1030	Unit 4 - Lesson 4C - Safety and Tactics
1200	Lunch
1300	Unit 4 - Lesson 4C - Safety and Tactics, cont.
1400	Break
1415	Unit 4 - Lesson 4C - Safety and Tactics, cont.
1515	Break
1530	Unit 4 - Lesson 4C - Safety and Tactics, cont.
1630	Break
1645	Review of Course
1700	End of Day 2

### Day 3

0800	Unit 4 - Lesson 4C - Safety and Tactics, cont.
1200	Lunch
1300	Unit 5 - Off Line Duties
1400	Break
1415	Unit 6 - Demobilization and Post-incident Responsibilities
1515	Break
1530	Unit 7 - Final Examination
1630	Close Out
1730	End of Session

## **UNIT 0 – INTRODUCTION**

### **INSTRUCTOR NOTES**

This unit is designed to be team taught by the course coordinator and the lead instructor. The course coordinator should present the material in the detailed lesson outline up to section IV, Course Process. The lead instructor should present the remainder of the material in the unit.

The expectations exercise requires students to work in groups. It is important that groups are intermixed with students from different agencies; this will enable students to become familiar with one another and the agencies they represent. Name cards should be prepared ahead of time and seats assigned to students to encourage this interaction.

When reviewing the pre-course work, many answers will be acceptable. The purpose of the pre-course work is to acquaint the students with the Incident Response Pocket Guide (IRPG).

Answer key to the pre-course work is located in Appendix D, Pre-Course Work.



## DETAILED LESSON OUTLINE

COURSE: Crew Boss (Single Resource), S-230

UNIT: 0 – Introduction

TIME: 2 Hours

TRAINING AIDS: Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers; table; name cards, VCR or DVD.

OBJECTIVES: The cadre will:

1. Introduce the instructors and the course coordinator.
2. Introduce the students.
3. Identify and explain administrative concerns.
4. Explain course process and expectations.
5. Introduce the course to the students.

OUTLINE	AIDS & CUES
<b>NWCG MISSION STATEMENT.</b>	00-01-S230-EP
<b>TITLE SLIDE.</b>	00-02-S230-EP
<b>PRESENT COURSE OBJECTIVES.</b>	00-03-S230-EP
I. INTRODUCE THE COURSE COORDINATOR AND THE INSTRUCTORS	
II. INTRODUCE THE STUDENTS	
<b>HAVE EACH STUDENT PRESENT THE FOLLOWING INFORMATION:</b>	00-04-S230-EP
<ul style="list-style-type: none"> <li>• Name</li> <li>• Job title and normal duties.</li> <li>• Where they work (agency, station, etc.).</li> <li>• Incident Command System (ICS) qualifications and most recent operations experience on an incident.</li> </ul>	
III. SCHEDULE OF EVENTS	00-05-S230-EP
A. Course Agenda	
<b>HAND OUT COURSE AGENDA AND REVIEW. THIS CAN BE PLACED IN THE STUDENT WORKBOOK PRIOR TO CLASS.</b>	

OUTLINE	AIDS & CUES
<p>B. Sign-in sheet</p> <p><b>HAND OUT AND COLLECT THE CLASS REGISTRATION FORM/SIGN-IN SHEET, OR ICS 211 CHECK-IN LIST.</b></p> <p>C. Housekeeping</p> <ul style="list-style-type: none"> <li>• Breaks (coffee, tea, soda, candy/vending machines, and punctuality).</li> <li>• Message and telephone location.</li> <li>• Cell phone policy.</li> <li>• Classroom arrangement (students will work in groups during exercises).</li> <li>• Facilities</li> <li>• Other concerns.</li> </ul> <p>D. Course Prerequisites</p> <p><b>REVIEW COURSE PREREQUISITES AND EXPLAIN THAT RECOMMENDED COURSE MATERIAL WILL NOT BE PRESENTED IN THE COURSE.</b></p> <p>E. Student Course Evaluations</p> <p>Students are to complete a unit evaluation at the end of each day. A final overall course evaluation will be completed on the final day of class.</p>	

OUTLINE	AIDS & CUES
<p>IV. COURSE PROCESS</p> <p>This course will be presented through a series of short lectures, videotape, electronic presentation slides, and exercises.</p> <p>The instructor's role in this training is to manage the learning environment to facilitate the achievement of the course and unit objectives.</p> <p>This course is designed to emphasize the primary skills required of a Crew Boss (Single Resource). It is not intended to cover every detail of the position. It is required training for all single resource positions.</p> <p>The concepts in this course can be applied to any single resource boss position, not exclusively to a Crew Boss of a 20-person hand crew.</p>	<p>00-06-S230-EP</p>
<p>V. MEASURING PERFORMANCE FOR THIS COURSE</p> <ul style="list-style-type: none"> <li>• There are unit quizzes, exercises, and a final examination for this course.</li> <li>• All unit quizzes will be reviewed after completion.</li> <li>• Students must achieve 70% or higher on the final examination.</li> </ul> <p><b>EMPHASIZE TO THE STUDENTS THAT THE FINAL EXAMINATION WILL BE COMPOSED OF SOME OF THE UNIT QUIZ QUESTIONS AND THEY CAN BE USED AS A STUDY AID.</b></p>	<p>00-07-S230-EP</p>

OUTLINE	AIDS & CUES
<p>VI. EXPECTATIONS</p> <p>A. Student Expectations Exercise</p> <p><b>IN THEIR ASSIGNED GROUPS, HAVE STUDENTS REVIEW THE QUESTIONS ON 00-08-S230-EP THEN LIST THEIR EXPECTATIONS FOR THE COURSE ON A FLIP CHART. HAVE EACH GROUP SELECT A SPOKESPERSON TO REPORT THEIR LIST TO THE CLASS.</b></p> <p><b>DISCUSS THE EXPECTATIONS THAT CAN BE ACHIEVED WITHIN THE ALLOTTED CLASS TIME. EXPLAIN THE DIFFICULTY ENCOUNTERED WITH THE HARD TO ACHIEVE ITEMS.</b></p> <p><b>THE LISTS SHOULD BE POSTED AROUND THE CLASSROOM AND REFERRED TO THROUGHOUT THE TRAINING SESSION AT VARIOUS TIMES BY THE INSTRUCTORS.</b></p>	<p>00-08-S230-EP</p>
<p>B. Instructor Expectations</p> <p>The student will:</p> <ul style="list-style-type: none"> <li>• Have an interest in becoming a Crew Boss (Single Resource).</li> <li>• Have completed their pre-course work.</li> <li>• Exhibit mutual cooperation with the group.</li> <li>• Be open minded to accomplishments during the course.</li> </ul>	<p>00-09-S230-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Use what is presented in the course to perform as a Crew Boss (Single Resource).</li> <li>• Participate actively in all of the training exercises presented in the course.</li> <li>• Return to class at stated times.</li> </ul>	00-10-S230-EP
<p>VII. CREW BOSS TRAITS</p> <p><b>EXERCISE:</b></p> <p><b>WITHIN GROUPS, STUDENTS WILL LIST GOOD AND BAD TRAITS OF A CREW BOSS ON A FLIP CHART. ALLOW 5-10 MINUTES FOR THIS EXERCISE.</b></p>	00-11-S230-EP
<p>VIII. COURSE OVERVIEW</p> <p><b>HAVE EXTRA POSITION TASK BOOKS AND FIRELINE HANDBOOKS AVAILABLE FOR THE STUDENTS.</b></p>	
<p>A. Position Description of a Single Resource Boss</p> <p><b>INSTRUCT THE STUDENTS TO READ THE POSITION DESCRIPTION OF A SINGLE RESOURCE BOSS IN THE FIRELINE HANDBOOK (FHB).</b></p>	00-12-S230-EP
<p>B. Review Pre-Course Work</p> <ol style="list-style-type: none"> <li>1. Discuss the pre-course questionnaire.</li> <li>2. Collect the pre-course questionnaire from the students.</li> </ol>	00-13-S230-EP

OUTLINE	AIDS & CUES
<p><b>SHOW CREW BOSS VIDEO, SECTION 1, THIRTY MILE (SEGMENT FROM BLM FIRE REFRESHER, 2002). THIS IS A LEAD-IN TO UNIT 1, OPERATIONAL LEADERSHIP.</b></p>	<p>00-14-S230-EP 00-01-S230-VT or DVD, 11 minutes</p>



## **UNIT 1 – OPERATIONAL LEADERSHIP**

### **INSTRUCTOR NOTES**

This unit consists of lecture and an exercise. Although answers are provided for the exercise, they may need to be clarified and in some cases expanded upon. Students who attend this course may have varied backgrounds and experience levels; therefore, instructors who teach this unit must be open to more than one way of performing leadership. It is important to encourage the students to discuss items thoroughly and that differences of opinion be accepted.



## DETAILED LESSON OUTLINE

**COURSE:** Crew Boss (Single Resource), S-230

**UNIT:** 1 – Operational Leadership

**TIME:** 1 Hour

**TRAINING AIDS:** Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers.

**OBJECTIVES:** Upon completion of this unit, students will be able to:

1. Describe the values and principles of operational leadership.
2. Identify the qualities of good leadership.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	01-01-S230-EP
<b>PRESENT UNIT OBJECTIVES.</b>	01-02-S230-EP
<b>I. LEADERSHIP CONCEPTS</b>  Crew Boss is the first position in the Incident Command System (ICS) where you need to make independent decisions based on <u>your</u> perception and knowledge of the situation.  The decisions you make as a Crew Boss can have major impacts on both the safety and effectiveness of your crew.  The most essential element of successful wildland firefighting is <u>competent</u> and <u>confident</u> leadership.	01-03-S230-EP

OUTLINE	AIDS & CUES
<p>What does it mean to be a competent, confident leader?</p> <p>Competent leaders are <u>FULLY QUALIFIED</u> and have sufficient skills to deal with the complexities of their position.</p> <p>Confident leaders are <u>EXPERIENCED</u> in decision-making, and have trust in their ability to make the correct choices for the situation.</p>	01-04-S230-EP
<p>Competence and Confidence will both come through <u>TRAINING</u> and <u>EXPERIENCE</u>.</p> <p>As a leader develops in competence, confidence will follow.</p>	01-05-S230-EP
<p>Leadership means providing purpose, direction, and motivation for wildland firefighters working to accomplish difficult tasks under dangerous and stressful circumstances.</p>	01-06-S230-EP
<p><b>ADMINISTER EXERCISE.</b></p> <ol style="list-style-type: none"> <li><b>1. DIVIDE STUDENTS INTO GROUPS OF 4-5. ASK THEM TO WORK AS A TEAM AND ANSWER THE EXERCISE QUESTIONS IN THEIR STUDENT WORKBOOK. GROUPS WILL ELECT A SPOKESPERSON TO PRESENT THEIR ANSWERS. ALLOW 5 MINUTES FOR COMPLETION.</b></li> <li><b>2. ASK SEVERAL OR ALL OF THE GROUPS TO PRESENT THEIR ANSWERS.</b></li> </ol>	01-07-S230-EP
<ol style="list-style-type: none"> <li><b>3. HAND OUT AND REVIEW THE EXERCISE SOLUTIONS. CLARIFY ANY POINTS THE STUDENTS MAY HAVE MISSED.</b></li> </ol>	01-01-S230-HO IG p. 1.21

OUTLINE	AIDS & CUES
<p>In confusing and uncertain situations, a good operational leader will:</p> <p>A. Take Charge of Assigned Resources.</p> <p>Establish chain of command and ensure subordinates are clear about who is in charge.</p> <p>B. Motivate Firefighters with a “CAN DO SAFELY” Attitude.</p> <p>Develop trust in your firefighters by ensuring their safety and well-being. Follow and enforce safety guidelines, share information, and update when changes occur.</p> <p>C. Demonstrate Initiative by Taking Action in the Absence of Orders.</p> <ol style="list-style-type: none"> <li>1. Conduct thorough size up of the situation before engaging in operations.</li> <li>2. Mitigate safety concerns; build a plan with contingency actions and trigger points.</li> </ol> <p>D. Communicate by Giving Specific Instructions and Asking for Feedback.</p> <p>Give clear instructions. Keep communication lines open along the chain of command.</p> <p>E. Supervise at the Scene of Action.</p> <p>Be on scene during important events, potentially hazardous situations, and operations.</p>	<p>01-08-S230-EP</p> <p>01-09-S230-EP</p>

OUTLINE	AIDS & CUES
<b>DUTY</b>	01-10-S230-EP
II. QUALITIES OF GOOD LEADERSHIP	01-11-S230-EP
<p><b>REFER STUDENTS TO THE INCIDENT RESPONSE POCKET GUIDE (IRPG). THIS UNIT IS BASED ON THE OPERATIONAL LEADERSHIP SECTION OF THE IRPG.</b></p>	
<p>A. A Good Leader Must be Proficient, both Technically and as a Leader.</p> <ol style="list-style-type: none"> <li>1. Take charge when in charge. <p>Maintain situation awareness and remain focused on the big picture.</p> </li> <li>2. Adhere to professional standard operating procedures. <p>Examples: LCES, 10+18, agency rules and regulations.</p> </li> <li>3. Develop a plan to accomplish given objectives. <p>Plan to meet objectives in given time frames and to expected standards; have contingencies established in case the situation changes.</p> </li> </ol>	01-12-S230-EP

OUTLINE	AIDS & CUES
<p data-bbox="284 285 1078 365">B. A Good Leader Must Make Sound and Timely Decisions.</p> <p data-bbox="381 420 1062 499">1. Maintain situation awareness in order to anticipate needed actions.</p> <p data-bbox="190 554 1078 634"><b>REVIEW THE RISK MANAGEMENT PROCESS IN THE IRPG.</b></p> <p data-bbox="381 680 1101 806">2. Develop contingencies and consider consequences; have a backup plan in case your primary plan fails. Examples:</p> <ul data-bbox="477 856 1136 1831" style="list-style-type: none"> <li data-bbox="477 856 1136 982">• Can you hold your burn out operation if the wind increases or changes directions?</li> <li data-bbox="477 1037 1052 1117">• Where is your next best place to establish a control line?</li> <li data-bbox="477 1171 1107 1251">• Have you scouted your contingency line or just looked at the map?</li> <li data-bbox="477 1306 1117 1386">• Are your logistical needs going to be met on time?</li> <li data-bbox="477 1440 1094 1520">• Can your resources get through the shift without additional support?</li> <li data-bbox="477 1575 1133 1654">• Should you make arrangements to get supplies yourself?</li> <li data-bbox="477 1709 1114 1831">• Can you make ground delivery work if the air show is shut down or re-prioritized?</li> </ul>	<p data-bbox="1162 289 1393 323">01-13-S230-EP</p>

OUTLINE	AIDS & CUES
<p>3. Improvise within the leader’s intent to handle a rapidly changing environment.</p> <ul style="list-style-type: none"> <li>• Make tactical changes as needed to handle the immediate needs of the situation.</li> <li>• Communicate any changes to the plan immediately.</li> <li>• Use the chain of command.</li> <li>• Stay within the scope of your responsibility.</li> <li>• Work with adjoining forces and supervisors to ensure LCES is not compromised.</li> <li>• Be ready to explain your actions and take responsibility for them.</li> </ul> <p>“Base all actions on current and expected behavior of the fire.”</p>	
<p>C. A Good Leader Must Ensure the Task is Understood, Supervised and Accomplished.</p> <p>1. Issue clear instructions.</p> <ul style="list-style-type: none"> <li>• Effective communication is the key to good leadership.</li> <li>• Ask clarifying questions and listen to feedback. Give clear instructions and be sure they are understood.</li> </ul>	<p>01-14-S230-EP</p>

OUTLINE	AIDS & CUES
<p>2. Observe and assess actions in progress without micro-managing.</p> <ul style="list-style-type: none"> <li>• “More than one way to skin a cat.”</li> <li>• Allow some latitude in task performance unless safety is compromised.</li> </ul> <p>3. Use positive feedback to modify duties, tasks, and assignments when appropriate.</p> <ul style="list-style-type: none"> <li>• Practice good communication skills.</li> <li>• Use open-ended questions to help individuals come to the desired result.</li> </ul>	
<p>D. A Good Leader Must Develop Subordinates for the Future.</p> <p>1. Clearly state expectations.</p> <ul style="list-style-type: none"> <li>• State your expectations clearly and often to eliminate misunderstandings or confusion about priorities and performance standards.</li> <li>• Communicate standards of performance, behavior, and position responsibilities to your firefighters before you are on the fireline.</li> </ul>	<p>01-15-S230-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• During training, briefings, and After Action Reviews (AAR), the performance standards should be revisited and adjusted as needed to increase the effectiveness of your team.</li> </ul> <p>2. Delegate tasks that you are not required to do personally.</p> <ul style="list-style-type: none"> <li>• Give your subordinates increasingly complex tasks/assignments as they progress in developing leadership skills and abilities.</li> <li>• You can delegate authority but not responsibility.</li> </ul> <p>3. Consider individual skill levels and developmental needs when assigning tasks.</p> <ul style="list-style-type: none"> <li>• Considering the complexity and potential problems related to a specific task (as well as the skills needed to perform the task), will allow you to assign the correct team member to the task.</li> <li>• Take advantage of training opportunities as they arise.</li> </ul>	

OUTLINE	AIDS & CUES
<p><b>RESPECT</b></p> <p>E. A Good Leader Must Know Their Subordinates and Look Out for Their Well-Being.</p> <p>1. Put the safety of your subordinates above all other objectives.</p> <ul style="list-style-type: none"> <li>• It is the responsibility of leaders to ensure that those under their control have a safe work environment. You cannot compromise on following LCES, the 10 and 18, or any other safety guidelines that pertain to the operation.</li> <li>• You must mitigate or eliminate hazards as they are discovered.</li> </ul> <p>“Fight fire aggressively, having provided for safety first.”</p> <p>2. Take care of your subordinate’s needs.</p> <ul style="list-style-type: none"> <li>• Ensure your firefighters have their logistical needs met before critical shortages occur.</li> <li>• Order food, water, and supplies well in advance of the need.</li> <li>• Observe work/rest guidelines and provide for time off when needed for family or other priority commitments.</li> </ul>	<p>01-16-S230-EP</p> <p>01-17-S230-EP</p>

OUTLINE	AIDS & CUES
<p>3. Resolve conflicts between individuals on the team.</p> <ul style="list-style-type: none"> <li>• When you place individuals in stressful situations for extended periods of time, conflicts are inevitable. The severity of the conflict is often elevated or decreased by the actions a supervisor takes.</li> <li>• Ensure team debriefings are conducted on a regular basis. Debriefings, if done in an open, professional and timely manner, can allow problems to surface and be dealt with before conflicts occur.</li> <li>• If there are severe or recurring personal issues between team members, you may need to obtain additional help from your supervisor or another mediator.</li> </ul>	
<p>F. A Good Leader Must Keep Their Subordinates Informed.</p> <p>1. Provide accurate and timely briefings.</p> <p>Obtain current and accurate information; communicate the information to your subordinates.</p>	01-18-S230-EP

OUTLINE	AIDS & CUES
<p>2. Give the reason (intent) for assignments and tasks.</p> <p>Explain how your tactics mesh with the overall incident strategy that is in place or being developed.</p> <p>3. Make yourself available to answer questions at appropriate times.</p> <ul style="list-style-type: none"> <li>• Make conducting AARs part of your standard operating procedures. AARs allow individuals a chance to reflect on the events of the day or assignment soon after completion, while events are still fresh in their memory.</li> <li>• Allow time to address individual concerns or issues in private after group debriefings.</li> </ul> <p>“Maintain prompt communication with your forces, your supervisor, and adjoining forces.”</p>	<p>IRPG, page viii or <a href="http://www.fireleadership.gov/toolbox/briefing_intent.html">http://www.fireleadership.gov/toolbox/briefing_intent.html</a></p>
<p>G. A Good Leader Must Build the Team.</p> <p>1. Conduct frequent debriefings with the team to identify lessons learned.</p>	<p>01-19-S230-EP</p>
<p><b>REVIEW THE AAR PROCESS IN THE IRPG.</b></p>	

OUTLINE	AIDS & CUES
<p>2. Recognize individual and team accomplishments and reward them appropriately.</p> <p>Recognize your team members through formal and non-formal means (extra effort awards, monetary and nonmonetary awards, promotions).</p> <p>3. Apply disciplinary measures equally.</p> <p>Follow agency guidelines for disciplinary actions. If you don't know the rules, get help from your human resource specialists or your supervisor.</p> <p><b>REFER THE STUDENTS TO CREW COHESION ASSESSMENT AT</b> <a href="http://www.fireleadership.gov/toolbox/documents/crew_Cohesion_assessment.pdf">http://www.fireleadership.gov/toolbox/documents/crew_Cohesion_assessment.pdf</a></p>	
<p>H. A Good Leader Must Employ Their Subordinates in Accordance with Their Capabilities.</p> <p>1. Observe human behavior as well as fire behavior.</p> <p>Become a student of human behavior; attend leadership and management training courses, read books, etc.</p>	01-20-S230-EP

OUTLINE	AIDS & CUES
<p>2. Provide early warning for subordinates of tasks they will be responsible for.</p> <ul style="list-style-type: none"> <li>• Communicate standards of performance, behavior, and position responsibilities to your firefighters before you are on the fireline.</li> <li>• During training, briefings, and AARs, the performance standards should be revisited and adjusted as needed to increase the effectiveness of your team.</li> </ul> <p>3. Consider team experience, conditioning, fatigue, and injury limitations when accepting assignments.</p> <ul style="list-style-type: none"> <li>• Know the condition and capabilities of your firefighters.</li> <li>• Ask your personnel about injuries, fatigue, mental, and physical condition during briefings and AARs.</li> <li>• Personal problems and conflicts can also affect the performance of the team.</li> <li>• Get to know your subordinates by taking the time to talk to them individually.</li> </ul>	

OUTLINE	AIDS & CUES
<b>INTEGRITY</b>	01-21-S230-EP
<p data-bbox="289 373 1146 457">I. A Good Leader Must Know Him/Herself and Seek Improvement.</p> <ol style="list-style-type: none"> <li data-bbox="386 510 1146 993">1. Know the strengths and weaknesses in your character and skill level. <ul style="list-style-type: none"> <li data-bbox="483 646 1146 720">• Self-evaluation is difficult; however, it is essential.</li> <li data-bbox="483 783 1146 856">• Admit when you are in over your head.</li> <li data-bbox="483 919 1146 993">• When you know a better/safer way of doing something, speak up.</li> </ul> </li> <li data-bbox="386 1045 1146 1350">2. Ask questions of peers and superiors. <ul style="list-style-type: none"> <li data-bbox="483 1140 1146 1213">• Don't be afraid to admit that you don't know everything.</li> <li data-bbox="483 1276 1146 1350">• Find someone you trust and respect and let them mentor you.</li> </ul> </li> <li data-bbox="386 1402 1146 1707">3. Actively listen to feedback from subordinates. <p data-bbox="483 1539 1146 1707">Practice active listening and seek feedback from those you are leading. You will be surprised what you will discover about them and yourself.</p> </li> </ol>	01-22-S230-EP

OUTLINE	AIDS & CUES
<p>J. A Good Leader Must Seek Responsibility and Accept Responsibility for His/Her Actions.</p> <ol style="list-style-type: none"> <li>1. Accept full responsibility for and correct poor team performance. <ul style="list-style-type: none"> <li>• You cannot delegate your responsibility, only your authority.</li> <li>• Poor performance must be corrected immediately, especially in issues regarding safety.</li> </ul> </li> <li>2. Credit subordinates for good performance. <ul style="list-style-type: none"> <li>• Praise in public. It's not about you.</li> <li>• Award good performance as appropriate.</li> </ul> </li> <li>3. Keep your superiors informed of your actions. <ul style="list-style-type: none"> <li>• Provide timely updates on your crew's progress throughout the operational period.</li> <li>• Advise superiors if you are unable to complete a task within the given time frame – or if you will finish ahead of schedule.</li> </ul> </li> </ol>	<p>01-23-S230-EP</p>

OUTLINE	AIDS & CUES
<p data-bbox="284 283 958 325">K. A Good Leader Must Set the Example.</p> <ol style="list-style-type: none"> <li data-bbox="381 367 1104 451">1. Share the hazards and hardships with your subordinates. <ul style="list-style-type: none"> <li data-bbox="479 504 1128 682">• You must be on the scene of important events. Remain mobile so that you can respond to priority areas of your area of responsibility.</li> <li data-bbox="479 724 1079 861">• Eat the same food and work/rest under the same conditions as your firefighters.</li> </ul> </li> <li data-bbox="381 903 1088 987">2. Don't show discouragement when facing setbacks. <ul style="list-style-type: none"> <li data-bbox="479 1039 1136 1260">• If you allow discouragement to dominate your thoughts you may lose perspective on important safety and tactical considerations that affect your team's performance.</li> <li data-bbox="479 1302 1128 1522">• It can be difficult to control your emotions when things are not going as planned. The main point is to not allow your feelings/emotions to cloud your judgment.</li> <li data-bbox="479 1564 1079 1743">• Team trust is built when leadership can remain decisive and objective during stressful or discouraging situations.</li> </ul> </li> </ol> <p data-bbox="479 1795 1088 1879">“Be Alert, Keep Calm, Think Clearly, Act Decisively.”</p>	<p data-bbox="1161 283 1388 325">01-24-S230-EP</p>

OUTLINE	AIDS & CUES
<p>3. Choose the difficult right over the easy wrong.</p> <ul style="list-style-type: none"> <li>• The responsibilities of leadership require you to make difficult choices regarding right and wrong.</li> <li>• Establish a personal code of behavior that you will not compromise.</li> </ul> <p><b>REFER STUDENTS TO THE FIRELINE LEADERSHIP WEBSITE AS AN ADDITIONAL REFERENCE:  <a href="http://www.fireleadership.gov/">http://www.fireleadership.gov/</a></b></p> <p><b>REVIEW UNIT OBJECTIVES.</b></p> <p><b>HAVE STUDENTS COMPLETE AND TURN IN A UNIT EVALUATION FORM.</b></p>	<p>01-25-S230-EP</p>



COURSE: Crew Boss (Single Resource), S-230

UNIT 1: Exercise - **SOLUTION**

Questions:

How do you provide purpose?

- **Communicate a crew/unit vision or mission statement.**

How do you provide direction?

- **Supervise by interaction and through delegation.**

How do you provide motivation?

- **Praise publicly; discipline privately.**
- **Take care of your crew member's needs.**
- **Provide for training opportunities.**
- **Keep crew informed.**



## **UNIT 2 – MOBILIZATION**

### **INSTRUCTOR NOTES**

This unit consists of lecture, two exercises, and a quiz. Although answers are provided for the exercises and quiz, they may need to be clarified and, in some cases, expanded upon. Students who attend this course may have varied backgrounds and experience levels; therefore, the instructors who teach this unit must be open to more than one way of performing the Crew Boss job. It is important to encourage the students to discuss topics thoroughly and that differences of opinion be accepted.



## DETAILED LESSON OUTLINE

- COURSE:** Crew Boss (Single Resource), S-230
- UNIT:** 2 – Mobilization
- TIME:** 1 Hour
- TRAINING AIDS:** Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers.
- OBJECTIVES:** Upon completion of this unit, students will be able to:
1. Identify the readiness and special equipment items that are required for the Crew Boss.
  2. List eight pieces of information to request from dispatch prior to departure.
  3. Identify five key elements of information needed to complete a Passenger/Cargo manifest.
  4. Explain the importance of evaluating crew readiness and establishing crew organization.
  5. Provide examples of appropriate travel procedures and conduct.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	02-01-S230-EP
<b>PRESENT UNIT OBJECTIVES.</b>	02-02-S230-EP
<b>ENSURE ALL STUDENTS FULLY UNDERSTAND THE UNIT OBJECTIVES.</b>	
I. CREW BOSS KIT	02-03-S230-EP
<b>REVIEW THE CREW BOSS KIT AND DISCUSS VARIOUS ITEMS A CREW BOSS MAY WANT TO TAKE TO A FIRE ASSIGNMENT.</b>	
<p>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.</p>	
<ul style="list-style-type: none"> <li><input type="checkbox"/> Proof of incident qualifications (Red Card)</li> <li><input type="checkbox"/> Position Task Book, NFES 2318</li> <li><input type="checkbox"/> Fireline Handbook, PMS 410-1, NFES 0065</li> <li><input type="checkbox"/> Incident Response Pocket Guide, NFES 1077</li> <li><input type="checkbox"/> National Interagency Mobilization Guide, NFES 2092</li> <li><input type="checkbox"/> Interagency Incident Business Management Handbook, NFES 2160</li> <li><input type="checkbox"/> Interagency Standards for Fire and Aviation Operations (Red Book)</li> <li><input type="checkbox"/> Radio frequency guide</li> <li><input type="checkbox"/> Agency directives</li> </ul>	

OUTLINE	AIDS & CUES
<p>Documentation Forms:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> ICS 214, Unit Log, NFES 1337</li> <li><input type="checkbox"/> ICS 226, Individual Performance Rating, NFES 2074</li> <li><input type="checkbox"/> SF-261, Crew Time Report, NFES 0891 and/or OF-288 Emergency Firefighter Time Report, NFES 0866</li> <li><input type="checkbox"/> SF-245, Manifest, Passenger/Cargo, NFES 1289</li> <li><input type="checkbox"/> Travel log</li> <li><input type="checkbox"/> Agency specific forms</li> <li><input type="checkbox"/> Accident forms</li> </ul> <p>Miscellaneous Items (optional):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Belt weather kit</li> <li><input type="checkbox"/> Handheld radio with extra batteries; cloning cable</li> <li><input type="checkbox"/> Compass and signal mirror</li> <li><input type="checkbox"/> Global Positioning System (GPS) unit</li> <li><input type="checkbox"/> Cell phone</li> <li><input type="checkbox"/> Phone list</li> <li><input type="checkbox"/> Phone/credit card</li> <li><input type="checkbox"/> Pocket calendar</li> <li><input type="checkbox"/> Pocket notepad</li> <li><input type="checkbox"/> Assorted pens, pencils, highlighters.</li> <li><input type="checkbox"/> Maps and/or atlas</li> <li><input type="checkbox"/> Flagging</li> <li><input type="checkbox"/> Calculator</li> <li><input type="checkbox"/> Flashlight with extra batteries</li> <li><input type="checkbox"/> Alarm clock</li> <li><input type="checkbox"/> Camera</li> <li><input type="checkbox"/> Binoculars</li> <li><input type="checkbox"/> Watch</li> <li><input type="checkbox"/> Fiber tape</li> </ul>	

OUTLINE	AIDS & CUES
<p data-bbox="190 289 878 321">II. NOTIFICATION OF MOBILIZATION</p> <p data-bbox="285 380 1052 499">Upon receiving notification of mobilization from dispatch, a Crew Boss should request the following information:</p> <ul data-bbox="285 558 997 1482" style="list-style-type: none"> <li data-bbox="285 558 704 590">• Incident/Project name</li> <li data-bbox="285 646 829 678">• Incident/Project order number</li> <li data-bbox="285 735 922 766">• Office reference number (cost code)</li> <li data-bbox="285 823 889 854">• Descriptive location/response area</li> <li data-bbox="285 911 980 942">• Legal location (township, range, section)</li> <li data-bbox="285 999 932 1031">• Incident radio frequency (if available)</li> <li data-bbox="285 1087 802 1119">• Incident base/phone number</li> <li data-bbox="285 1176 623 1207">• Request number</li> <li data-bbox="285 1264 862 1295">• Reporting date/time and location</li> <li data-bbox="285 1352 992 1383">• Transportation arrangements/travel routes</li> <li data-bbox="285 1440 672 1472">• Special instructions</li> </ul> <p data-bbox="285 1535 1084 1661"><i>Retain a copy of the order form containing this information from dispatch for your personal incident experience record.</i></p>	<p data-bbox="1146 380 1382 411">02-04-S230-EP</p>

OUTLINE	AIDS & CUES
<p>The following information is needed from dispatch to fill out a Passenger/Cargo Manifest:</p> <ul style="list-style-type: none"> <li>• Number of passengers</li> <li>• Ordering unit</li> <li>• Project name</li> <li>• Project number</li> <li>• Name of carrier</li> <li>• Mode of transportation and identification number</li> <li>• Pilot or driver</li> <li>• Chief of party</li> <li>• Report to</li> <li>• If delayed, contact</li> <li>• Departure – place and Estimated Time of Departure (ETD)</li> <li>• Intermediate stops – place and ETD</li> <li>• Destination – Estimated Time of Arrival (ETA) and place</li> <li>• Passenger and/or cargo name</li> <li>• Male or Female (M/F)</li> </ul>	<p>02-05-S230-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Passenger weight</li> <li>• Cargo weight</li> <li>• Duty assignment, if applicable</li> <li>• Home unit</li> <li>• Signature of authorized representative</li> <li>• Date</li> </ul>	
<p><b>PRESENT EXERCISE 1.</b></p>	<p>02-06-S230-EP</p>
<p><b>1. DIVIDE STUDENTS INTO GROUPS OF 4-5. ASK THEM TO WORK AS A TEAM AND ANSWER THE EXERCISE QUESTIONS IN THEIR STUDENT WORKBOOK. HAVE THEM COMPLETE THE ENTIRE EXERCISE OR ASSIGN SPECIFIC QUESTIONS TO EACH GROUP (DEPENDING ON TIME).</b></p>	<p>SW p. 2.7 - 2.8</p>
<p><b>2. GROUPS WILL ELECT A SPOKESPERSON TO PRESENT THE SOLUTIONS. ALLOW 10 MINUTES FOR COMPLETION.</b></p>	
<p><b>3. ASK EACH GROUP TO PRESENT THEIR SOLUTIONS.</b></p>	
<p><b>4. HAND OUT AND REVIEW THE EXERCISE SOLUTIONS. ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b></p>	<p>IG p. 2.11 02-01-S230-HO</p>

OUTLINE	AIDS & CUES
<b>PRESENT EXERCISE 2.</b>	02-07-S230-EP
<b>1. HAVE STUDENTS COMPLETE THE PASSENGER/CARGO MANIFEST FROM THE INFORMATION PROVIDED. ALLOW 10 MINUTES FOR COMPLETION.</b>	SW p. 2.9, 2.11
<b>2. HAND OUT THE EXERCISE SOLUTIONS AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b>	IG p. 2.13 02-02-S230-HO
<b>PRESENT EXERCISE 3.</b>	02-08-S230-EP
<b>1. IN THEIR SAME GROUPS, STUDENTS ARE TO ANSWER THE EXERCISE QUESTIONS IN THEIR STUDENT WORKBOOK. HAVE THEM COMPLETE THE ENTIRE EXERCISE OR ASSIGN SPECIFIC QUESTIONS TO EACH GROUP (DEPENDING ON TIME).</b>	SW p. 2.13 - 2.14
<b>2. GROUPS WILL ELECT A SPOKESPERSON TO PRESENT THE SOLUTIONS. ALLOW 15-20 MINUTES FOR COMPLETION.</b>	
<b>3. HAVE THE GROUPS PRESENT THEIR SOLUTIONS.</b>	
<b>4. HAND OUT THE EXERCISE SOLUTIONS AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b>	IG p. 2.15 02-03-S230-HO
<b>REVIEW UNIT OBJECTIVES.</b>	02-09-S230-EP

OUTLINE	AIDS & CUES
<p><b>PRESENT UNIT 2 QUIZ.</b></p> <p><b>ALLOW 15 MINUTES FOR COMPLETION.</b></p>	<p>02-10-S230-EP SW p. 2.15 - 2.18</p>
<p><b>HAND OUT AND REVIEW THE QUIZ ANSWERS WITH THE STUDENTS.</b></p>	<p>IG p. 2.19 02-04-S230-HO</p>
<p><b>REMIND STUDENTS THAT THE FINAL EXAM WILL BE COMPOSED OF SOME OF THE UNIT QUIZ QUESTIONS AND CAN BE USED AS A STUDY AID.</b></p>	
<p><b>HAVE STUDENTS COMPLETE AND TURN IN A UNIT EVALUATION FORM.</b></p>	

COURSE: Crew Boss (Single Resource), S-230

UNIT 2: Exercise 1 - **SOLUTION**

1. What miscellaneous optional equipment should a Crew Boss consider for an incident?

- **Belt weather kit**
- **Handheld radio with extra batteries; cloning cable**
- **Compass and signal mirror**
- **Global Positioning System (GPS) unit**
- **Maps**
- **Flagging**

2. List the administrative items that should be included in a Crew Boss kit.

- **ICS-214, Unit Log**
- **ICS-226, Individual Performance Rating**
- **Crew Time Report**
- **Manifest, Passenger/Cargo blanks**
- **Travel log**
- **Agency specific forms**
- **Accident forms**
- **Fireline Handbook**
- **Incident Response Pocket Guide**
- **National Interagency Mobilization Guide**
- **Interagency Incident Business Management Handbook**
- **Interagency Standards for Fire and Aviation Operations**
- **Radio frequency guide**
- **Agency directives**
- **Pocket calculator**
- **Pens/pencils**
- **Note pad**
- **Atlas**
- **Cell phone**
- **Phone/credit card**

3. What are eight pieces of information a Crew Boss should request from dispatch?
  - **Incident/Project name**
  - **Incident/Project order number**
  - **Office reference number (cost code)**
  - **Descriptive location/response area**
  - **Legal location (township, range, section)**
  - **Incident radio frequency (if available)**
  - **Incident base/phone number**
  - **Request number**
  - **Reporting date/time and location**
  - **Transportation arrangements/travel routes**
  - **Special instructions**
  
4. What is the maximum allowable weight for web gear and personal gear a crew member is allowed to take to a fire?
  - **65 pounds**  
**Refer to the National Interagency Mobilization Guide**
  
5. What is the maximum allowable weight for a crew?
  - **5100**  
**Refer to the National Interagency Mobilization Guide**
  
6. What must be done with all saws before they can be flown?
  - **Purge saws per agency requirements**
  
  - **Cover dogs**
  
  - **Install chain guard**

COURSE: Crew Boss (Single Resource), S-230

UNIT 2: Exercise 2 - **SOLUTION**

Directions:

Complete the attached Passenger/Cargo Manifest form using the following information received from dispatch.

Scenario:

You are the Crew Boss for the Pecos River #1 crew (Type 2 crew), from New Mexico State Department of Lands located at Santa Fe, NM. Your crew's names and weights are:

Johnny Jones 243#, Fred Mertz 135#, Penny Crook 145#, Sally Rietz 135#, Tyrone Brown 165#, Richard Rodriguez 200#, Jose Villaneuve 167#, Tony Chin 140#, Roger Torez 135#, Mac Sanchez 243#, Susie Campbell 200#, Megan Christy 123#, Mike Yee 170#, Mica Goldstein 155#, Mohamed Smith 255#, Jon Johnson 176#, Toy Kim 110#, Yuk Yee 150#, Robert Stoprunning 167#.

You have two saw packs that weigh 50 pounds each. Each crew member has personal gear and web gear that weigh 55 pounds each. The fire you are going to is the Rocky Point fire on the New River Gorge NRA (NRP) managed by the National Park Service. You are flying into Dulles Airport on a NIFC contract jet and the pilot is Steve Smith. The crew is to report to Doug Wallner at New River Gorge.

STANDARD FORM 245 (6/77) Prescribed by USDA FSM 5716 USDI MP9400.518		<b>PASSENGER AND CARGO MANIFEST</b>				NO. OF PASSENGERS ON THIS PAGE <u>20</u>	PAGE <u>1</u> OF <u>1</u>
ORDERING UNIT NM-SWC		PROJECT NAME Rocky Point			PROJECT NO. NM-SWC-0001		
NAME OF CARRIER Sierra Pacific - NIFC		MODE OF TRANS & ID NO. Boeing 737 N737SP			PILOT OR DRIVER Steve Smith		
CHIEF OF PARTY Dan Smith, CRWB		REPORT TO: New River Gorge			IF DELAYED CONTACT SWCC 505-843-3473 NICC 208-389-2400		
DEPARTURE		INTERMEDIATE STOPS			DESTINATION		
PLACE	ETD	ETA	PLACE	ETD	ETA	PLACE	
ABQ	0600 MDT	1100 EDT	ATL	1200 EDT	1345 EDT	Dulles Int'l Airport	
PASSENGER AND/OR CARGO NAME		M/F	PASSENGER WEIGHT	CARGO WEIGHT	DUTY ASSIGNMENT IF APPLICABLE		HOME UNIT
1.	Dan Smith	M	185	55	CRWB		NM-NMS (all)
2.	Johnny Jones	M	243	55	FFT2		
3.	Fred Mertz	M	135	55	FFT2		
4.	Penny Cook	F	145	55	FFT2		
5.	Sally Rietz	F	135	55	FFT2		
6.	Tyrone Brown	M	165	55	FFT2		
7.	Richard Rodriguez	M	200	55	FFT2		
8.	Jose Villaneuve	M	167	55	FFT1		
9.	Tony Chin	M	140	55	FFT2		
10.	Roger Torez	M	135	55	FFT2		
11.	Mac Sanchez	M	243	55	FFT2		
12.	Susie Campbell	F	200	55	FFT2		
13.	Megan Christy	F	123	55	FFT2		
14.	Mike Yee	M	170	55	CRWB (t)		
15.	Mica Goldstein	F	155	55	FFT2		
16.	Mohamed Smith	M	255	55	FFT2		
17.	Jon Johnson	M	176	55	FFT2		
18.	Toy Kim	F	110	55	FFT1		
19.	Yuk Yee	M	150	55	FFT2		
20.	Robert Stoprunning	M	167	55	FFT2		
21.	Saw Pack			50			
22.	Saw Pack			50			
SIGNATURE OF AUTHORIZED REPRESENTATIVE					DATE 8/20/XXXX		

CHIEF OF PARTY COPY

COURSE: Crew Boss (Single Resource), S-230

UNIT 2: Exercise 3 - **SOLUTION**

Directions:

Take 15 minutes to complete the following exercise in your groups. Elect a new spokesperson to present the answers to the class.

At 2230 the dispatcher mobilizes a crew and calls the Crew Boss.

1. It is now 0600 the following morning and the last of the crew has just arrived. What should the Crew Boss do now?
  - **Check the crew members' red card qualifications and other specialized qualifications (EMT, sawyer, bilingual).**
  - **Establish his or her authority and standard operating procedures.**
  - **Ensure that each crew member has the proper personal protective equipment.**
  - **Break the crew into squad configurations.**
  - **Brief the crew on all aspects of the assignment.**
  - **Evaluate the crew's mental and physical condition.**
  - **Find out if any crew members have medical conditions.**
  - **Facilitate trainee assignments.**
  
2. Two crew members arrive in shorts and tennis shoes. They explain that their fire gear is in their red bags and they will change at the incident. What should the Crew Boss do?
  - **Make them change.**
  - **Don't allow them to go.**
  - **Perform crew conduct briefing.**

3. What items should the Crew Boss include in a crew conduct briefing?
- **Advise personnel of weight limitations and hazardous materials.**
  - **Emphasize a professional attitude.**
  - **Explain that clean, professional clothing should be worn at all times during travel status.**
  - **Tell crew members to keep squad bosses informed of their location at all times.**
  - **Do not tolerate fighting, stealing, alcohol, drugs, and sexual harassment.**
  - **Discourage horseplay.**
  - **Tell crew to respect private property and provide for your own equipment security.**
  - **Discuss respect for others.**
  - **Advise Crew Boss/squad boss of any unsafe or illegal activities.**
  - **Insist on courtesy to other crews, i.e., noise in sleeping areas.**
  - **Discuss appropriate attire during out-of-service hours.**
  - **Discuss agency procedures pertaining to inmate crews.**

4. The crew has just arrived at the airport. What are the Crew Boss's responsibilities at this time?

- **Ensure the crew remains together.**
- **Check in with the appropriate personnel (ramp manager, dispatcher, airport manager or airport personnel) and provide them with a copy of the crew Passenger and Cargo Manifest and the crew's request number.**
- **Minimize impact on facilities.**
- **Prepare crew and equipment for flight, purge saws, remove fuses, and dump water. Stage crew and equipment together.**
- **Perform personnel head count and equipment inventory.**
- **Prepare for crew and equipment weigh-in.**
- **If departure is not imminent provide for food and rest rooms.**
- **Ensure provision is made to store vehicles if applicable.**

5. A ramp manager informs the Crew Boss that his/her crew will be flying with three more crews and that his/her crew will be the first crew to load. What should the Crew Boss consider?
- **Determine who will load the equipment and how should it be loaded.**
  - **Advise personnel to wear hearing protection.**
  - **Caution personnel about propellers and jet engine hazards.**
  - **Decide on personnel loading procedures - back to front or right side of the aisle or left.**
  - **Do a final head count.**
6. What items should the Crew Boss consider when loading and transporting people and equipment via ground transportation?
- **Personnel loading procedures - back to front or right side of the aisle or left.**
  - **Vehicle type and condition.**
  - **Driver condition/qualifications.**
  - **Need for an additional vehicle (gear and equipment transportation).**
  - **Complete destination instructions (guide or map).**
  - **Estimated time of travel.**
  - **Crew welfare (food and rest).**
  - **Maintain communications with all vehicles.**
7. The crew has worked ten hours and is being released to go home. It is a five hour drive to their home unit and some crew members have an additional two hour drive to their duty station. What should the Crew Boss do?
- **Adhere to agency work/rest guidelines.**
  - **Request to stay overnight at the fire and leave in the morning.**
  - **Consider a short drive towards the home unit if it would increase quality sleep.**



## UNIT 2 QUIZ SOLUTION

Circle the most correct answer.

1. If a rotation list at the local unit is in place and the Crew Boss is placed on call for an incident assignment, what should the Crew Boss do?
  - a. Prepare an appropriate list of dispatch office and dispatcher phone numbers.
  - b. Clear schedule to honor the commitment to a potential assignment.
  - c. Have transportation available to the dispatch center.
  - b. Keep dispatch informed of his or her location.
  - d. All of the above.**
  
2. Miscellaneous optional items a Crew Boss may need include:
  - a. Compass
  - b. Belt Weather Kit
  - c. Signal Mirror
  - d. All of the above**
  - e. None of the Above
  
3. Which item is most important when preparing a crew for a helicopter flight?
  - a. Crew manifest**
  - b. Handheld radio
  - c. ICS-214, Unit Log
  - d. After Action Review (AAR)
  
4. When the crew is assembled at dispatch, the Crew Boss should:
  - a. Check-out PPE items to the crew members.
  - b. Check and load all tools on the bus.
  - c. Administer the work capacity test to anyone that needs it.
  - d. Get with dispatch and review specific items for the assignment.**

5. Which item(s) is/are most important when evaluating crew members?
  - a. Red card qualifications
  - b. Individual physical condition (fatigue)
  - c. Work capacity test score
  - d. Job description at the home unit
  - e. **a and b**
  
6. If a Crew Boss is dispatched to a different geographic area and gets lost in transit, he or she should have which of the following?
  - a. Division supervisor's name
  - b. **Dispatch telephone numbers**
  - c. Map of the fire
  - d. Agency Administrator's name
  
7. Which piece of information received from dispatch upon mobilization is most important for a Crew Boss?
  - a. Type of incident
  - b. Aircraft name
  - c. **Incident order number**
  - d. Jurisdiction/Agency
  
8. Which items are most important for a Crew Boss when filling out a crew manifest?
  - a. Crew name, individual name, chief of party
  - b. Individual weights, cargo weight, demobilization destination
  - c. Aircraft type and number, pilot's name, date and time
  - d. **a and b**

9. A Crew Boss has been told to meet an assigned crew at the National Guard Armory. Other than introductions to the crew members and squad bosses, the Crew Boss should: (choose all that apply)
- a. **Ensure all personnel have protective footwear.**
  - b. **Establish authority.**
  - c. Leave the crew for long periods.
  - d. **Evaluate crew member mental and physical condition.**
  - e. **Organize the crew into a configuration that will meet anticipated incident needs.**
10. List five important administrative items required for a Crew Boss kit.
- **ICS-214, Unit Log**
  - **ICS-226, Individual Performance Rating**
  - **Crew Time Report**
  - **Manifest, Passenger/Cargo blanks**
  - **Travel log**
  - **Agency specific forms**
  - **Accident forms**
  - **Fireline Handbook**
  - **Incident Response Pocket Guide**
  - **National Interagency Mobilization Guide**
  - **Interagency Incident Business Management Handbook**
  - **Interagency Standards for Fire and Aviation Operations**
  - **Radio frequency guide**
  - **Agency directives**
  - **Pocket calculator**
  - **Pens/pencils**
  - **Note pad**
  - **Atlas**
  - **Cell phone**
  - **Phone/credit card**

11. List eight pieces of information to request from dispatch prior to departure for an assignment.

- **Incident/Project name**
- **Incident/Project order number**
- **Office reference number (cost code)**
- **Descriptive location/response area**
- **Legal location (township, range, section)**
- **Incident radio frequency (if available)**
- **Incident base/phone number**
- **Request number**
- **Reporting date/time and location**
- **Transportation arrangements/travel routes**
- **Special instructions**

12. A crew is released from the fire after a difficult 14-day assignment. It is an eight hour drive to their home unit. They will depart the fire at 1400 hours and arrive home by 2200 hours. Some crew members have an additional two hour drive to their duty station. What should the Crew Boss do?  
(choose two answers)

- a. Drive straight home and request a motel at the home unit.
- b. Drive to dispatch and stay the night.
- c. **Request to stay overnight at the incident.**
- d. **Consider a short drive toward the home unit if it would increase quality sleep.**

## **UNIT 3 – ARRIVAL AT THE INCIDENT**

### **INSTRUCTOR NOTES**

In this unit, a series of questions with possible answers and brief explanations is provided to the instructors. Instructors may wish to employ the questions as a technique for instructing this unit or they may use the questions as topics from which to lecture. Each class is different and instructor techniques will vary based on the level of skills the students bring to the course.

This unit consists of lecture, three exercises, and a quiz. To ensure all the unit objectives are accomplished, the unit quiz questions should be reviewed by the instructors before and after presenting this unit.



## DETAILED LESSON OUTLINE

- COURSE:** Crew Boss (Single Resource), S-230
- UNIT:** 3 – Arrival at the Incident
- TIME:** 3 Hours
- TRAINING AIDS:** Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers.
- OBJECTIVES:** Upon completion of this unit, students will be able to:
1. Describe the intra-crew coordination considerations for the incident check-in process.
  2. List five key pieces of information that should be gathered when receiving an assignment or briefing.
  3. Describe the components of the Incident Action Plan (IAP) and how the components relate to the Crew Boss role in planning for safe and effective fire suppression activities.
  4. Assess crew logistical needs based upon the operational period assignment.
  5. List the essential items that must be covered during a crew briefing prior to assignment.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	03-01-S230-EP
<b>PRESENT UNIT OBJECTIVES.</b>	03-02-S230-EP
<b>ENSURE ALL STUDENTS FULLY UNDERSTAND THE UNIT OBJECTIVES.</b>	03-03-S230-EP
I. INTRA-CREW COORDINATION	
A. Why is it important to anticipate crew needs and coordinate activities prior to and during the incident check-in process?	03-04-S230-EP
<ul style="list-style-type: none"> <li>• Crew may be sent out on assignment immediately; reduces the possibility of forgetting needed items.</li> </ul>	
<ul style="list-style-type: none"> <li>• Saves time.</li> </ul>	
<ul style="list-style-type: none"> <li>• Spreads chores around, i.e., delegate.</li> </ul>	
<ul style="list-style-type: none"> <li>• Presents a more professional crew image.</li> </ul>	
B. How can a Crew Boss accomplish the necessary Crew Boss duties effectively?	03-05-S230-EP
<p>Delegate to crew leadership to primary assistant, squad bosses.</p>	
C. What problems may surface if a Crew Boss doesn't prepare for, assign, and accomplish the necessary duties?	03-06-S230-EP
<ul style="list-style-type: none"> <li>• Intra-crew communication and information transfer will break down.</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Will create poor crew morale.</li> <li>• Operational period assignment may not be understood.</li> <li>• Timekeeping inaccuracies and delays.</li> <li>• Transportation needs may be unfulfilled.</li> <li>• Time frames may not be met.</li> <li>• Equipment and supplies may not be available.</li> <li>• Crew campsite or gear storage area may be inadequate.</li> <li>• Incident communication may be nonexistent.</li> <li>• Feeding schedule and location may be misunderstood.</li> </ul>	
<p>D. What are the two types of briefings a Crew Boss will participate in?</p> <ol style="list-style-type: none"> <li>1. Informal. Discussing assignments and receiving instructions at the work site, drop point, en route to the incident, or home unit.</li> <li>2. Formal. Attending a regularly scheduled incident operational period briefing at a briefing area.</li> </ol> <p>On the majority of small crew and initial attack incidents, briefings will be informal. Document all briefings.</p>	03-07-S230-EP

OUTLINE	AIDS & CUES
<p>E. What important information should be gathered at an informal briefing?</p> <ul style="list-style-type: none"> <li>• Who</li> <li>• What</li> <li>• Where</li> <li>• When</li> <li>• Why</li> </ul> <p>How: Small incidents - usually by the Incident Commander.</p> <p>Large incidents - specific information pertaining to the Crew Boss assignment usually occurs after the operational period briefing and is given by the division supervisor.</p> <p>F. What important information should be gathered at a formal briefing?</p> <p>The same information as the informal briefing.</p> <p>How: General information pertaining to the Crew Boss assignment given by the operations section chief.</p> <p>Example: Daily morning operational briefing.</p> <p><b>REFER TO THE BRIEFING CHECKLIST IN THE IRPG OR THE FHB (BACK COVER).</b></p>	<p>03-08-S230-EP</p>

OUTLINE	AIDS & CUES
<p>II. INCIDENT ACTION PLAN (IAP)</p> <p>A. What is a plan?</p> <p>Ordered sequence of events to occur over a specified time period in order to accomplish specific objectives.</p> <p>B. What is an IAP?</p> <p>A formal document normally developed by an Incident Management Team (IMT) that describes general control objectives. It reflects the overall incident strategy and specific action plans, which are to be implemented for the next operational period.</p> <p><b>THE FOLLOWING DEFINITIONS ARE LOCATED IN THE GLOSSARY OF THE FHB:</b></p> <p>1. Operational period</p> <p>The period of time scheduled for execution of a given set of tactical actions as specified in the IAP. Operational periods can be of various lengths, although usually not over 24 hours.</p> <p>2. Strategy</p> <p>The general plan or direction selected to accomplish incident objectives.</p>	<p>03-09-S230-EP</p>

OUTLINE	AIDS & CUES
<p>3. Tactics</p> <p>Deploying and directing resources on an incident to accomplish the objectives designated by strategy (“how the plan is accomplished”).</p> <p>C. What types of incidents require an IAP?</p> <p>Type 4/5: The incident is generally contained in the first burning period. Resources vary from a single module to several resources. These incidents have minimal complexity and <b>do not</b> require an IAP.</p> <p>Type 3: Some or all of the command and general staff positions may be activated and/or an incident management team. The incident may be divided into divisions with multiple resources of various types. The incident will involve multiple operational periods and <b>may require</b> an IAP.</p> <p>Type 1/2: These incidents require the mobilization of an incident management team. These incidents usually extend into multiple operational periods and can be of national significance. An IAP is <b>required</b> for these types of incidents.</p> <p>1. Do all incidents utilize strategy? - Yes</p> <p>2. Do all incidents utilize tactics? - Yes</p>	<p>03-10-S230-EP</p>

OUTLINE	AIDS & CUES
<p>3. Are all incidents managed within the time frame described as the operational period?</p> <p>- Yes</p> <p>4. Why don't all incidents utilize a written IAP?</p> <p>- Not all incidents are of sufficient complexity or duration to warrant the need.</p>	
<p>D. What are the parts of the IAP?</p>	<p>03-11-S230-EP 03-12-S230-EP</p>
<p><b>REFER STUDENTS TO THE SAMPLE IAP IN THEIR STUDENT WORKBOOKS. REVIEW AND SUMMARIZE THE PURPOSE AND IMPORTANCE OF THE FOLLOWING FORMS:</b></p>	<p>SW p. 3.21 IG p. 3.17</p>
<p>1. ICS 202, Incident Objectives</p> <ul style="list-style-type: none"> <li>• Developed by the IMT.</li> <li>• Used to communicate strategic decisions and guide tactical implementations.</li> </ul> <p>2. ICS 203, Organization Assignment List</p> <ul style="list-style-type: none"> <li>• Identifies names of people in primary overhead positions.</li> <li>• Valuable reference.</li> </ul> <p>3. Fire weather forecast</p> <p>Summarizes weather influences and forecasts for the incident location.</p>	

OUTLINE	AIDS & CUES
<p>4. Fire behavior forecast</p> <ul style="list-style-type: none"> <li>• Discusses fire behavior past, present, and predicted.</li> <li>• Identifies areas of potential or special concern.</li> </ul> <p>5. Safety message</p> <ul style="list-style-type: none"> <li>• Alerts personnel of general and specific hazards facing personnel assigned to the incident.</li> <li>• Not restricted to fireline conditions only.</li> <li>• ICS 215A, Incident Safety Analysis (LCES).</li> </ul> <p>6. ICS 204, Assignment List</p> <ul style="list-style-type: none"> <li>• Identifies work location, supervisor, and assigned resources.</li> <li>• Assigns tasks, transportation, operational period start and finish.</li> <li>• References the special instructions or considerations for the assigned work area.</li> </ul>	

OUTLINE	AIDS & CUES
<p>7. ICS 205, Incident Radio Communication Plan</p> <ul style="list-style-type: none"> <li>• Lists the radio frequency plan for the incident.</li> <li>• May identify special considerations for radio use.</li> </ul> <p>8. ICS 206, Medical Plan</p> <ul style="list-style-type: none"> <li>• Gives procedures to follow if medical attention is needed.</li> <li>• May differentiate between minor medical (“medical transport” of injured individual) and major medical (“medevac”) procedures.</li> <li>• Should outline procedure for night shift medevac procedures, if applicable.</li> </ul> <p>9. ICS 220, Air Operations Summary</p> <ul style="list-style-type: none"> <li>• Summarizes aircraft missions planned for the operational period.</li> <li>• Identifies aircraft assigned and available for use on the incident.</li> </ul>	

OUTLINE	AIDS & CUES
<p>10. Special instructions</p> <ul style="list-style-type: none"> <li>• Tactical use of special equipment.</li> <li>• Environmental considerations.</li> <li>• Rehabilitation plan.</li> <li>• Minimum Impact Suppression Tactics (MIST).</li> </ul> <p>11. Human resource message, Equal Employment Opportunity (EEO)</p> <p>Reinforces civil rights and equal employment opportunity concerns.</p> <p>12. ICS 214, Unit Log</p> <ul style="list-style-type: none"> <li>• Daily diary <ul style="list-style-type: none"> <li>- Used to capture the main events during the operational period.</li> </ul> </li> <li>• A blank copy is usually included with the IAP.</li> <li>• Submit copy to the planning unit, i.e., documentation unit leader (DOCL).</li> </ul> <p>13. Maps</p> <p>Includes an incident map, location of features, assigned work areas, and transportation routes.</p>	

OUTLINE	AIDS & CUES
<b>PRESENT EXERCISE 1.</b>	03-13-S230-EP
1. <b>REFER STUDENTS TO EXERCISE 1. ALLOW 20 MINUTES FOR COMPLETION.</b>	
2. <b>DISCUSS THE ICS 214, UNIT LOGS THE STUDENTS HAVE COMPLETED.</b>	
3. <b>HAND OUT THE EXERCISE SOLUTION AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b>	03-01-S230-HO IG p. 3.41
4. <b>EMPHASIZE THAT THE IMPORTANCE OF FILLING OUT AN ICS 214 IS TO CAPTURE THE MAIN EVENTS DURING THE OPERATIONAL PERIOD.</b>	
III. <b>INCIDENT OBJECTIVES/WORK PLANNING RELATIONSHIP</b>	
A. What are the most important components of the IAP?	03-14-S230-EP
<ul style="list-style-type: none"> <li>• All are important for effective, coordinated, and safe incident management.</li> </ul>	
B. How do the incident objectives and tactical assignments relate to the Crew Boss role in planning for the work activities of the crew?	
<ul style="list-style-type: none"> <li>• Reflect the strategic parameters adopted by incident managers for the incident.</li> </ul>	
<ul style="list-style-type: none"> <li>• Reinforce public and firefighter safety as priority #1.</li> </ul>	

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Will provide guidance for selecting the equipment and tactics that can be appropriately utilized by the crew.</li> <li>• Will provide knowledge of the planning cycle and operational period and how it applies to the crew assignment.</li> </ul>	
<p><b>REFER STUDENTS TO THE PLANNING AND OPERATIONAL CYCLE CHARTS IN THE FHB. DISCUSS HOW A CREW FITS INTO THE INCIDENT PLANNING PROCESS.</b></p>	03-15-S230-EP
<p><b>IV. ASSESSING TACTICAL AND LOGISTICAL NEEDS</b></p>	
<p>After a Crew Boss receives a briefing and an IAP, he/she needs to assess logistical needs.</p>	03-16-S230-EP
<p><b>PRESENT EXERCISE 2.</b></p>	03-17-S230-EP
<p><b>1. REFER STUDENTS TO EXERCISE 2. ASSIGN EACH GROUP A CREW NAME FROM THE IAP THEY REVIEWED EARLIER.</b></p>	
<p><b>2. STUDENTS SHOULD SOLVE THE QUESTIONS IN GROUPS AND ELECT A SPOKESPERSON TO PRESENT THEIR SOLUTIONS TO THE CLASS. ALLOW 10 MINUTES FOR THE STUDENTS TO COMPLETE THE EXERCISE.</b></p>	
<p><b>3. ASK EACH GROUP TO PRESENT THEIR FINDINGS TO THE CLASS.</b></p>	
<p><b>4. HAND OUT THE EXERCISE SOLUTIONS AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b></p>	03-02-S230-HO IG p. 3.45

OUTLINE	AIDS & CUES
<p>V. CREW BRIEFING</p> <p>The Crew Boss is responsible for gathering as much practical information as necessary before assignments begin. The Crew Boss is also equally responsible for ensuring all crew members are properly briefed.</p> <p>How much information does the Crew Boss need to relay during the crew briefing?</p> <ul style="list-style-type: none"> <li>The Crew Boss does not need to relay everything, but <u>must</u> give the crew enough information to perform its assigned function <u>safely</u> and effectively.</li> </ul> <p><b>REFER TO THE BRIEFING CHECKLIST ON THE BACK COVER OF THE IRPG.</b></p> <p><b>PRESENT EXERCISE 3.</b></p> <ol style="list-style-type: none"> <li><b>REFER STUDENTS TO EXERCISE 3. DIRECT THEM TO WORK IN GROUPS.</b></li> <li><b>AFTER 5 MINUTES, SOLICIT LISTS FROM SEVERAL OF THE GROUPS.</b></li> <li><b>HAND OUT THE EXERCISE SOLUTION AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b></li> <li><b>DISCUSS THE REASONS CERTAIN ITEMS SHOULD BE CONSIDERED ESSENTIAL AND WHY OTHERS ARE NOT. GIVE OWNERSHIP TO THE INDIVIDUAL GROUPS (SUCH AS WHY ONE GROUP INCLUDED SOME ITEMS BUT NOT OTHERS).</b></li> </ol>	<p>03-18-S230-EP</p>
	<p>03-19-S230-EP</p>
	<p>03-03-S230-HO IG p. 3.49</p>

OUTLINE	AIDS & CUES
<p><b>REVIEW UNIT OBJECTIVES.</b></p>	<p>03-20-S230-EP 03-21-S230-EP</p>
<p><b>CLARIFY ANY QUESTIONS STUDENTS MAY HAVE REGARDING THIS UNIT.</b></p>	
<p><b>PRESENT UNIT 3 QUIZ.</b></p>	<p>03-22-S230-EP SW p. 3.17 - 3.20</p>
<p><b>ALLOW 15 MINUTES FOR COMPLETION.</b></p>	
<p><b>HAND OUT QUIZ SOLUTIONS AND REVIEW WITH THE STUDENTS. REMIND STUDENTS THE QUIZ ANSWERS ARE TO BE USED AS STUDY AIDS FOR THE FINAL EXAM.</b></p>	<p>03-04-S230-HO IG p. 3.51</p>
<p><b>HAVE STUDENTS COMPLETE AND TURN IN A UNIT EVALUATION FORM.</b></p>	

Incident Action Plan

<b>INCIDENT OBJECTIVES</b>	1. INCIDENT NAME Hermit	2. DATE PREPARED 10-4	3. TIME PREPARED 2300
4. OPERATIONAL PERIOD (DATE/TIME) <p style="text-align: center;">(10-5)</p>			
5. GENERAL CONTROL OBJECTIVES FOR THE INCIDENT (INCLUDE ALTERNATIVES)			
1) Provide for personnel and public safety.			
2) Protect structure at Martin Cabin site.			
3) Keep suppression costs commensurate with resource values.			
4) Keep acreage burned to less than 50 acres if possible in Yolla Bolla Middle Wilderness area(s).			
Keep fire south of West Low Gap to Black Rock Mountain Ridge and Road 10w60; west of Road 10w39 and north of Road 10w40 and 27n23.			
5) Keep acreage burned to less than 50 acres if possible in south portion of the south fork of the Trinity River and Shell Mountain Creek.			
6) Hold fire on Penny Ridge.			
7) Aggressively attack new fires as requested.			
6. WEATHER FORECAST FOR OPERATIONAL PERIOD See attachment			
7. GENERAL SAFETY MESSAGE See attachment			
8. ATTACHMENTS ( MARK WITH AN "X" IF ATTACHED)			
<input checked="" type="checkbox"/> ORGANIZATION LIST (ICS 203) <input checked="" type="checkbox"/> MEDICAL PLAN (ICS 206) <input checked="" type="checkbox"/> EEO MESSAGE <input checked="" type="checkbox"/> ASSIGNMENT LIST (ICS 204) <input checked="" type="checkbox"/> INCIDENT MAP <input checked="" type="checkbox"/> FIRE BEHV. FORECAST <input checked="" type="checkbox"/> COMMUNICATIONS PLAN (ICS 205) <input checked="" type="checkbox"/> TRAFFIC PLAN <input checked="" type="checkbox"/> WILDERNESS INSTR. <span style="display: block; text-align: right;">(DOZER USE)</span>			
202 ICS 3-80	9. PREPARED BY (PLANNING SECTION CHIEF) <i>Bob Smith</i>	10. APPROVED BY (INCIDENT COMMANDER) <i>Tom Scott</i>	

ORGANIZATION ASSIGNMENT LIST		1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED
<b>POSITION</b>		<b>4. OPERATIONAL PERIOD (DATE/TIME)</b>		
<b>5. INCIDENT COMMANDER AND STAFF</b>		10-5 /0600-1800		
<b>INCIDENT COMMANDER</b>	TOM SCOTT	<b>9. OPERATIONS SECTION</b>		
<b>DEPUTY</b>	DAN SNYDER	<b>CHIEF</b>	JIM SMITHERS	
<b>SAFETY OFFICER</b>	CHARLES EVANS	<b>TRAINEE</b>	KEN WARD	
<b>INFO. OFFICER</b>	LINDA ADAMS	<b>a. BRANCH I - DIVISION/GROUPS</b>		
<b>LIAISON OFFICER</b>	MIKE POWERS	<b>BRANCH DIRECTOR</b>	DUANE STEVENS	
<b>6. AGENCY REPRESENTATIVES</b>		<b>DEPUTY</b>		
<b>AGENCY</b>	<b>NAME</b>	<b><u>DIVISION/GROUP</u></b>	<b>A</b>	JEFF CAVES
CDF	ROGER LAKES	<b><u>DIVISION/GROUP</u></b>	<b>D</b>	LINDA SMIT
USFS	PAUL BRIMSON	<b><u>DIVISION/GROUP</u></b>	<b>E</b>	JOHN WILSON
USFS	MARY PAULCY	<b><u>DIVISION/GROUP</u></b>	<b>F</b>	TOM MOORE
BLM	HANK BROWN	<b><u>DIVISION/GROUP</u></b>		
<b>7. PLANNING SECTION</b>		<b>b. BRANCH II - DIVISION/GROUPS</b>		
<b>CHIEF</b>	BOB SMITH	<b>BRANCH DIRECTOR</b>	STEVE RECKER	
<b>DEPUTY</b>	CRAIG BIRD	<b>DEPUTY</b>		
<b>RESOURCES</b>	NANCY HAYES	<b><u>DIVISION/GROUP</u></b>	<b>B</b>	BOB ELLIOT
<b>SITUATION UNIT</b>	FRANK WHITE	<b><u>DIVISION/GROUP</u></b>	<b>C</b>	SUE WHITE
<b>DOCUMENTATION UNIT</b>	TRAVIS STEVEN	<b><u>DIVISION/GROUP</u></b>	<b>G</b>	DICK WEST
<b>DEMOBILIZATION UNIT</b>	BRANDI LYNN	<b><u>DIVISION/GROUP</u></b>	<b>H</b>	KAREN AMES
<b>TECHNICAL SPEC</b>				
<b>FIRE BEHAVIOR</b>	JOHN HIGGINS	<b>c. BRANCH III - DIVISION/GROUPS</b>		
<b>EEO SPEC</b>	ED ROWE	<b>BRANCH DIRECTOR</b>	GARN BENSON	
<b>REHAB. SPEC</b>	JUDY NEWMAN	<b>DEPUTY</b>		
<b>TRAINING SPEC</b>	RUSTY MEYERS	<b><u>DIVISION/GROUP</u></b>	<b>IA</b>	CHAD POLE
<b>HAND CREW SPEC</b>	DICK RIOS	<b><u>DIVISION/GROUP</u></b>		
		<b><u>DIVISION/GROUP</u></b>		
		<b><u>DIVISION/GROUP</u></b>		
<b>8. LOGISTICS SECTION</b>		<b>d. AIR OPERATIONS BRANCH</b>		
<b>CHIEF</b>	PAT LEWIS	<b>AIR OP. BRANCH DIR.</b>	MIKE REASNER	
<b>DEPUTY</b>	GARY KING	<b>AIR TACTICAL GRP SUP.</b>		
<b>a. SUPPORT BRANCH</b>		<b>AIR SUPPORT GROUP SUP.</b>	JIM BURTON	
<b>DIRECTOR</b>	ED CROWLES	<b>HELIBASE MANAGER</b>		
<b>SUPPLY UNIT</b>	LESIE FRYLE	<b>AIR TKR/FIXED-WING CRD.</b>		
<b>FACILITIES UNIT</b>	JIM PATTERSON			
<b>GROUND SUPPORT UNIT</b>	CARL WOLF			
<b>b. SERVICE BRANCH</b>		<b>10. FINANCE SECTION</b>		
<b>DIRECTOR</b>	N/A	<b>CHIEF</b>	LISA GOODWIN	
		<b>DEPUTY</b>	STEVE HOLMES	
		<b>TIME UNIT</b>	CATHY WALLACE	
<b>COMMUNICATIONS UNIT</b>	BILL WILLIAMS	<b>PROCUREMENT UNIT</b>	KAREN ACTION	
<b>MEDICAL UNIT</b>	CARLA JONES	<b>COMP/CLAIMS UNIT</b>	ROSS BRIMWELL	
<b>FOOD UNIT</b>	JOE LANNING	<b>COST UNIT</b>		
<b>203 ICS 1-82</b>	<b>PREPARED BY (RESOURCES UNIT)</b>			

## **WEATHER FORECAST**

FORECAST #11 FOR THE HERMIT FIRE ISSUED 0500-PDT OCTOBER.  
REDDING FIRE WEATHER OFFICE ATMU CA-07.

DISCUSSION: WEAK HIGH PRESSURE IS NOW JUST ALONG THE  
COAST. EXPECT SLOW WARMING AND DRYING WITH LIGHT WINDS.

TODAY: INVERSION OVER AREA UNTIL 1300 TO 1500. MAXIMUM  
TEMPERATURE 68 TO 73. MINIMUM HUMIDITY 38% TO 42%. WINDS  
UPSLOPE 3 TO 6 MPH AND WEST 5 TO 10 MPH OVER RIDGES.

TONIGHT: STRONG INVERSION FORMING WITH LIGHT WINDS AND  
GOOD HUMIDITY RECOVERY.

OUTLOOK THURSDAY: SLOW WARMING AND DRYING TREND WITH  
LIGHT WINDS.

CHRIS FONTANA  
REDDING FIRE WEATHER

## FIRE BEHAVIOR FORECAST NO.13

NAME OF INCIDENT: \_\_\_\_\_ PREDICTION FOR: \_\_\_\_\_  
FOREST: \_\_\_\_\_ OPERATIONAL PERIOD: \_\_\_\_\_  
NAME AND DATE: \_\_\_\_\_  
FORECAST ISSUED: 2200 HRS. - 10/0 SIGNED: \_\_\_\_\_

WEATHER SUMMARY: Improving conditions will occur; warmer, drier, improved humidities, and near normal after front winds.

FIRE BEHAVIOR (GENERAL): Behavior patterns have changed slightly due to the light showers that fell yesterday. 1-hour fine fuels reached moisture of extinction levels over the lower 2/3 of the slopes. 10-hour fuels raised 5-10%, but these should dry within the next 24-36 hours. 100-1000 hour fuels no change except probability of ignition down 55-77% through 1400 hours then 65-78% on exposed and non-shaded areas.

SPECIFIC:

BRANCH 1 (NORTH): This branch will have the greatest amount of exposure to possible drying conditions as all divisions (except "F" and Lower part of "E" and "A") will be in the wind influence and above inversion. Expect rates of spread of 8-12 in exposed wind areas. Spotting short range 1/10 - 3/10 mile. Continued intense burning of large 100-1000 hour fuels.

BRANCH 2 (SOUTH): Relatively moderate conditions will exist over this branch as fog and air moisture have reduced burning intensities. Smoldering of large materials and piles will be potential threats. Mop-up effort will be enhanced by slow/less intense conditions.

SPECIAL CONCERNS: Be sure when burning out/backfiring that fire carries well to main fire. Leave no islands near control lines posing a threat during future operational periods.

AIR OPERATIONS: Fog and low clouds may affect early supplying of line personnel at spike camp locations. Smoke should clear and allow clearer air after 1200 hours.

SAFETY: Allow ample time for accessing safety zones in division E/F throughout firing operations. Provide escape routes, watch out for rolling (hot) material that could create intense (head) runs to control line during firing operations.

## SAFETY MESSAGE

NAME OF INCIDENT: \_\_\_\_\_ DATE \_\_\_\_\_  
OPERATIONAL PERIOD (DATE/TIME): \_\_\_\_\_ 0600-1800 \_\_\_\_\_

The Primary factor leading up to an accident at this time is FATIGUE. As Crew Bosses your primary responsibility is the safety and welfare of your assigned personnel. Remember to pace yourself and your crew. Provide adequate food, water, rest and other pertinent supplies. Keep your Division Supervisor informed of your status and needs (advise your supervisor of your R&R needs). Follow the "2 for 1 Work/Rest Guidelines."

### Incident Hazard (s) Reminder List:

- Falling snags and green trees.
- Steep slopes and loose footing.
- Dozers, vehicles, aircraft in work areas.
- Snakes, ticks, spiders.
- Road traffic.
- Cool/wet weather (be prepared).
- A sudden change in fire behavior due to an influence by the wind, fuels, topography and/or partially burned out areas inside the control line.
- Limited visibility due to fog/low clouds and smoke.
- Base hazards.

Follow helitack instructions and policies. When flying, carry fire shelters and wear personal protective equipment on all flights.

### Special Note

To all personnel involved in the backfire operation in Division E and F:

- Have escape routes planned and safety zones constructed prior to firing.
- Watch for rolling material that may ignite fuels below your line and create rapid runs upslope.
- Maintain control and accountability of all assigned personnel.
- Watch for hang fires from Aerial Ignition Delivery System operation.
- Pay strict attention to Fire Orders, Watch Out Situations, and continually review Lookouts, Communications, Escape Routes, Safety Zones (L.C.E.S.).

Safety Officer



TACTICAL  
HAZARDS

- Indirect fireline
- Downhill fireline
- Underslung fireline
- Mid-slope fireline
- Frontal assault
- Anchor points
- Extreme conditions (spotting, wind driven)
- Reburn potential

OTHER  
HAZARDS

- Hazardous materials
- Transportation, 1 hr. +
- Communications
- Structure protection

TACTICAL HAZARD  
MITIGATIONS

- Maintain LCES at all times.
- Use Air Attack as a lookout.
- Follow Downhill Fireline Checklist.
- Post lookouts for snags, rolling material and spots below fireline.
- Ensure fireline is anchored.
- Develop anchor by constructing or burning out.
- Firefighters know current and predicted weather and fire behavior forecast.
- Line supervisors will provide clear concise briefing.
- Stay above snags, post lookouts, flag hazard trees and snags.
- Only construct direct line with immediate burn out of fuels.
- FBA/Meteorologist to develop weather watch system and broadcast any change in predicted weather.
- Firefighters monitor fire behavior and always have a safety zone nearby.

OTHER HAZARD  
MITIGATIONS

- Avoid hazmat situations.
- Avoid smoke from non-wood fiber material.
- Utilize hazmat response teams.
- Limit shifts to 14 hours total.
- Use remote camps to limit travel times.
- Use helicopter transport when feasible.
- Ensure traffic planning is safe and enforced.
- All firefighters will have communications.
- If communications can not be maintained, abort assignment.
- Always maintain LCES.
- Review “Structural Watch Out Situations.”
- Abandon structures before safety is compromised.
- Air attack and/or Lead Plane always in air to coordinate aircraft.
- Pilots will be briefed on strategy and tactics.

1. BRANCH <b>I</b>	2. DIVISION/GROUP <b>A</b>	<b>ASSIGNMENT LIST</b>					
3. INCIDENT NAME <b>Hermit</b>			4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>				
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u> BRANCH DIRECTOR _____			DIVISION/GROUP SUPERVISOR <u>Jeff Caves</u> AIR TACTICAL GROUP SUPERVISORY _____				
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
E 1460	Richards	5	N	DP-6/0800	DP-6/1800		
OC #36 Type 2	Johnson	21	N	DP-6/0800	Rtn. to Kelsy camp		
Water Tender	Burke	1	N	DP-6/0800	Rtn. to Kelsy camp		
7. CONTROL OPERATIONS  <b>Mop-up 200 feet in from the fireline. Share water tender with Division D.</b>							
8. SPECIAL INSTRUCTIONS  <b>See attached instructions for wilderness boundary dozer line construction criteria &amp; mitigations.</b>							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	3	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>			APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2345</b>

1. BRANCH <b>I</b>		2. DIVISION/GROUP <b>D</b>		<b>ASSIGNMENT LIST</b>			
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Linda Smit</u>					
BRANCH DIRECTOR <u>Duane Stevens</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 4 Engine E 1084	Higgins	5	Y	DP-6/0800	DP-6/1800		
Type 4 Engine E 1474	Hatcher	3	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Crew Plumas 31	Brown	20	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Crew Tahoe 32	Hines	19	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Crew Six Rivers 18	Wilson	20	Y	DP-6/0800	Rtn. to Kelsy camp		
Type 2 Strike Team ST 9274 G	Anderson	45	Y	DP-6/0800	Rtn. to Kelsy camp		
7. CONTROL OPERATIONS  Mop up and grid 200 feet. The length of the division. Continue to check for spots on north side of ridge.							
8. SPECIAL INSTRUCTIONS  See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.250 TX/RX	KING/NIRSC	5	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>			APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2345</b>

1. BRANCH <b>I</b>		2. DIVISION/GROUP <b>E</b>		<b>ASSIGNMENT LIST</b>			
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>John Wilson</u>					
BRANCH DIRECTOR <u>Duane Stevens</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Safety Officer	Hansen	1	Y	H-1 camp 0800	H2 - camp		
2 Plumas Fallers	Grant	3	N	"	H2 - camp		
Type 2 Redding Regs.	Lankster	20	Y	"	H2 - camp		
Redding Type 1 Smokejumpers	Atlas	20	N	"	H2 - camp		
Type 2 Lassen Regs.	Rodriguz	19	Y	"	H2 - camp		
Type 2 Plumas Regs.	Kenton	20	Y	Helibase- fly to H- 2/0800	Coyote along Chicago camp trail		
Type 2 Tahoe Regs.	Campton	20	Y	"	"		
7. CONTROL OPERATIONS Scatter brush & widen line where necessary from Fisher ridge to division E/F boundary. Begin backfire from Black Rock Mtn. out main ridge east toward H-2, 1/4-mile, (If time/conditions are favorable, continue backfiring to division E/F boundary) coordinate firing with division F Supervisor. Helicopter 901 with aerial ignition delivery system (firing boss-Jim Hall) available at 0930 to assist firing.							
8. SPECIAL INSTRUCTIONS Redding, Lassen, Jumpers return to H-2 and camp after operational period. Plumas, Tahoe and fallers to coyote along Chicago camp trail. Ensure <u>L.C.E.S.</u> at all times!							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	3	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>			APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2345</b>

1. BRANCH <b>I</b>		2. DIVISION/GROUP <b>F</b>		<b>ASSIGNMENT LIST</b>			
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>			DIVISION/GROUP SUPERVISOR <u>Tom Moore</u>				
BRANCH DIRECTOR <u>Duane Stevens</u>			AIR TACTICAL GROUP SUPERVISORY				
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 2 Crew St 3600 G	Priest	36	Y	DP- 12/0800	DP-12/1800		
Type 2 Crew St 1651 G	Benny	40	Y	DP- 12/0800	DP-12/1800		
Type 2 Crew St 6601 G	Curb	38	Y	DP- 12/0800	DP-12/1800		
Type 2 Crew St 1624 G	Smithe	38	Y	DP- 12/0800	DP-12/1800		
Type 1 Crew Mormon Lake	Tisner	19	N	DP- 12/0800	DP-12/1800		
Type 1 Crew St Warm Springs	Clemmens	20	N	DP- 12/0800	DP-12/1800		
Type 2 Crew St Klamath #3	Kooly	20	Y	DP- 12/0800	DP-12/1800		
Safety Officer	Barger	1	Y	DP- 12/0800	DP-12/1800		
7. CONTROL OPERATIONS Complete line construction from South Fork Trinity river up Fisher Ridge to Division E/F boundary. Coordinate backfiring with division E and continue firing from division e/f/ boundary down to DP-12. Helicopter 901 with firing boss - Jim Hall will be available until 1800 to support firing operation.							
8. SPECIAL INSTRUCTIONS Crews will eat dinner at DP-12 prior to driving to base.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	5	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>			APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2345</b>

1. BRANCH <b>II</b>		2. DIVISION/GROUP <b>B</b>		<b>ASSIGNMENT LIST</b>			
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-0800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Tom Moore</u>					
BRANCH DIRECTOR <u>Steve Recker</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER		NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME	
Type 3 Engine E 3661	Wilson		5	Y	DP-H/0800	DP-4/1800	
Type 2 Crew Modoc #12	Mason		20	Y	DP-H/0800	DP-4/1800	
Type 2 Crew Lassen #6	Mead		20	Y	DP-H/0800	DP-4/1800	
Water Tender	McFarland		1	N	DP-H/0800	DP-4/1800	
7. CONTROL OPERATIONS							
Install hoselay from B/C division boundary to north section break and mopup all hotspots within 150 feet of the line. Use portable pumps if practical.							
8. SPECIAL INSTRUCTIONS							
See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.)			APPROVED BY (PLANNING SECTION CHIEF)			DATE	TIME
Nancy Hayes			Bob Smith			10/4	2330

1. BRANCH <b>II</b>		2. DIVISION/GROUP <b>C</b>		<b>ASSIGNMENT LIST</b>			
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-0800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Sue White</u>					
BRANCH DIRECTOR <u>Steve Recker</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 3 Engine Strike Team	Willager	16		DP-4/0800	DP-4/1800		
Type 2 Crew Plumas #32	Andrews	20		DP-4/0800	DP-4/1800		
Type 2 Crew Six Rivers #4	Fesser	20		DP-4/0800	DP-4/1800		
2 Fallers	Jones	3		DP-4/0800	DP-4/1800		
7. CONTROL OPERATIONS  Grid and flag spots and mop up 150 feet inside line the length of the division. Pick up supplies for backpack pumps from supply and take them with the crews.							
8. SPECIAL INSTRUCTIONS  See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>			APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2330</b>

1. BRANCH <b>II</b>		2. DIVISION/GROUP <b>G</b>		<b>ASSIGNMENT LIST</b>			
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-0800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Dick West</u>					
BRANCH DIRECTOR <u>Steve Recker</u>		AIR TACTICAL GROUP SUPERVISORY					
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 3 Engine Z601	Donnell	19	Y	DP- 11/0800	DP-11/1800		
Type 2 Crew Water Tender	Heins	1	Y	DP- 11/0800	Rtn. to base		
St crew OC-29 OC-30	Rogers	39	Y	DP- 11/0800	Rtn. to base		
St crew 9271	Reason	44	Y	DP- 11/0800	Rtn. to base		
Safety Officer	Moore	1	Y	DP- 11/0800	Rtn. to base		
7. CONTROL OPERATIONS  Grid and mop up 200 feet inside the fire the length of the division.							
8. SPECIAL INSTRUCTIONS  See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>			APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2330</b>

1. BRANCH <b>II</b>		2. DIVISION/GROUP <b>H</b>		<b>ASSIGNMENT LIST</b>			
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>			
5. OPERATIONS PERSONNEL							
OPERATIONS CHIEF <u>Jim Smithers</u>			DIVISION/GROUP SUPERVISOR <u>Karen Ames.</u>				
BRANCH DIRECTOR <u>Steve Recker</u>			AIR TACTICAL GROUP SUPERVISORY				
6. RESOURCES ASSIGNED THIS PERIOD							
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR	LEADER	NUMBER PERSON S	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME		
Type 2 Dozer 1150	Lynch	2	Y	Kelsy Camp/0800	1800		
Type 2 Dozer D6-C	Stout	2	Y	DP-4/0800	1800		
Type 2 Dozer D5-13	Drem	2	Y	DP-4/0800	1800		
Type 2 Crew Taos #7	Gonzalez	19	Y	DP-4/0800	1800		
7. CONTROL OPERATIONS  Contact Karen Ames rehab group supervisor for work assignments.							
8. SPECIAL INSTRUCTIONS  See attached instructions for <u>wilderness boundary</u> dozer line construction criteria & mitigations.							
9. DIVISION/GROUP COMMUNICATIONS SUMMARY							
FUNCTION	FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND	168.075 TX/RX	KING/NIRSC	1	LOGISTICS			
TACTICAL	168.200 TX/RX	KING/NIRSC	4	AIR TO GROUND	170.000 TX/RX	KING/NIRSC	7
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>			APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2330</b>

1. BRANCH <b>III</b>		2. DIVISION/GROUP <b>IA Initial Attack</b>		<b>ASSIGNMENT LIST</b>				
3. INCIDENT NAME <b>Hermit</b>				4. OPERATIONAL PERIOD DATE <u>10-5</u> TIME <u>0600-1800</u>				
5. OPERATIONS PERSONNEL								
OPERATIONS CHIEF <u>Jim Smithers</u>		DIVISION/GROUP SUPERVISOR <u>Chap Pole</u>						
BRANCH DIRECTOR <u>Garn Benson</u>		AIR TACTICAL GROUP SUPERVISORY						
6. RESOURCES ASSIGNED THIS PERIOD								
STRIKE TEAM/TASK FORCE RESOURCE DESIGNATOR		LEADER		NUMBER PERSONS	TRANS. NEEDED	DROP OFF PT/TIME	PICK UP PT/TIME	
Type 2 Crew Pike Regulars		T. Foley		20	N	0800/Ruth Helibase	1800/Return Kelsy camp	
Type 3 Crew E11 211		F. Bird		2	N	0800/Ruth Helibase	1800/Return Kelsy camp	
Type 3 Crew E1122		B. Adams		2	N	0800/Ruth Helibase	1800/Return Kelsy camp	
7. CONTROL OPERATIONS <b>Aggressively attack new fires as assigned by the operations section chief.</b>								
8. SPECIAL INSTRUCTIONS <b>Pike Regulars supply (1) additional firefighter for each engine. Teams to be ready for <u>immediate</u> dispatch!</b>								
9. DIVISION/GROUP COMMUNICATIONS SUMMARY								
FUNCTION		FREQ.	SYSTEM	CHAN.	FUNCTION	FREQ.	SYSTEM	CHAN.
COMMAND REPEAT	LOCAL				SUPPORT REPEAT			
DIV/GROUP TACTICAL					GROUND-TO-AIR			
PREPARED BY (RESOURCES UNIT LDR.) <b>Nancy Hayes</b>				APPROVED BY (PLANNING SECTION CHIEF) <b>Bob Smith</b>			DATE <b>10/4</b>	TIME <b>2330</b>

INCIDENT RADIO COMMUNICATIONS PLAN				1. Incident Name	2. Date/Time Prepared	3. Operational Period Date/Time
				<b>HERMIT</b>	<b>10/04 2100</b>	<b>10/05</b>
4. Basic Radio Channel Utilization						
System/Cache	Channel	Function	Frequency/Tone	Assignment	Remarks	
King/NIRSC	1	CMD Direct	168.075 TX/RX	Incident Commander, Operations, Air Operations, branch, division, Hermit Communications, Medical Unit	Branch director, division supervisors need to monitor command net. Use com RPT. Frequency only to contact base.	
King/NIRSC	2	CMD/Repeat	170.425 TX 168.075 RX	"	"	
King/NIRSC	3	Tactical	168.200 TX/RX	Division A & E	Turn in all cache radios at end of operational period. Return all line transfer slips at end of operational period.	
King/NIRSC	4	Tactical	168.050 TX/RX	Division B, C, G, H	Commo center will only monitor command RPT and support nets.	
King/NIRSC	5	Tactical	168.250 TX/RX	Division D & F Group IA	All medical emergencies should be communicated on command RPT only.	
King/NIRSC	6	Air to Ground	169.150 TX/RX	(Restricted) Aerial ignition delivery system operations.	Branch/division supervisors use support net for all orders.	
King/NIRSC	7	Air to Ground	170.000 TX/RX	Operations, Air Operations, branch directors, division supervisors.		
King/NIRSC	8	Air Guard	168.625 RX/TX	Aircraft Emergency	Emergency Use Only	
5. Prepared by (Communication Unit)						
<i>Dee Naaf</i>						

ICS 205 NFES 1330

<b>MEDICAL PLAN</b>	1. INCIDENT NAME	2. DATE	3. TIME	4. OPERATIONAL PERIOD				
	Hermit	PREPARED 10/4	PREPARED 2100	0600-1800				
5. INCIDENT MEDICAL AID STATIONS								
MEDICAL AID STATIONS	LOCATION			PARAMEDICS				
				YES	NO			
Hermit Base	2-miles south of Ruth Ranger Stat.			X				
6. TRANSPORTATION								
A. AMBULANCE SERVICES								
NAME	ADDRESS		PHONE	PARAMEDICS				
				YES	NO			
South Trinity Health Center	7am to 5pm ~ Mad River		514-3316	X				
Garbov Ambulance Service	317 Arther RD., Ashville		923-1121	X				
Fortune Ambulance Service	Anderson		911	X				
Mercy Air Ambulance	Mercy Hospital, Redding		225-2015	X				
Helicopter 502	Ruth Airport			X				
B. INCIDENT AMBULANCES								
NAME	LOCATION			PARAMEDICS				
				YES	NO			
Mercy, Redding	40.34.14		122.23.97					
Enlow, Chico	39.45.68		121.52.60					
Community Burn Ctr., Chico	" " "		" " "					
7. HOSPITALS								
NAME	ADDRESS		TRAVEL TIME	PHONE	HELIPAD		BURN	
					YES	NO	CTR	YES
Redding Medical	1100 Butte St., Redding		45M	244-5130	X			
Mercy Hospital	2525 South St., Redding		45M	246-0021	X			
Enlow Hospital	W. 5th St., Chico		1Hr.	897-5000	X			
Community Hospital	3500 Park Ave., Chico		1Hr.	344-1767		X	X	
8. MEDICAL EMERGENCY PROCEDURES								
<p>Medical unit will coordinate all evacuations with the operations section chief. Medical unit leader &amp; compensation for injury person are located in Hermit base minor injuries transport to Hayfork Medical Unit. Serious injuries transport by helicopter to hospital in Redding. Burn victims transport to Enlow helipad then ambulance to burn center at Community.</p>								

AIR OPERATIONS SUMMARY		1. INCIDENT NAME		2. OPERATIONAL PERIOD (Date & Time)		3. DISTRIBUTION					
		HERMIT		10-5 0600-1800		HELIBASES <u>10 EA.</u> FIXED-WING BASES <u>10 EA.</u>					
4. PERSONNEL AND COMMUNICATIONS		NAME		AIR/GROUND FREQUENCY		5. REMARKS (Spec. Instructions, Safety Notes, Hazards, Phonics)					
AIR OPERATIONS BRANCH DIRECTOR		<u>REASNER</u>		<u>170.000/</u>		- Medevac ship available, 506 - Mark any helispots that have not been marked. - Retrieve all slings/garbage - Have aerial ignition delivery system machine ready by 0930. - Fly a.m. & p.m. food to camp. - Fly safely!!!					
AIR TACTICAL GROUP SUPERVISORY		<u>AA06/AA240</u>		<u>122.925</u>							
HELICOPTER COORDINATOR		<u>L-54</u>		<u>135.975</u>							
AIR TANKER/FIXED-WING COORDINATOR		<u>BURTON, JIM</u>									
HELIBASE MANAGER		<u>HALL, JIM</u>		<u>166.675</u>							
AERIAL IG. DEL. (AIDS)											
SYSTEM FIRING BOSS											
6. LOCATION/ FUNCTION	7. ASSIGNMENT	8.		9.		10.		11.		12.	
		FIXED-WING		HELICOPTERS		TIME		AIRCRAFT ASSIGNED		OPERATING BASE	
		NO.	TYPE	NO.	TYPE	AVAILABLE	COMMENT				
Division E	Use air tankers for pretreatment of black rock & fisher ridge. Use (AIDS) machine if conditions are favorable.	20	DC-6	512	3	0700	0700			Redding/ Ruth	
Division F	Same as division E, use Type 1 helicopter if needed.	05	P2-V	901	2	0700	0700			Redding/ Ruth	
Division C/G	Use helicopters as needed when requested	13	DC4	234	1	0700	0700			Redding/ Ruth	
	Fly fallers to H-I (first flight), then stage at helibase for IA.	30	C130	502	2	0700	0700			Redding/ Ruth	
	Recon flight (operations) MEDEVAC operations	28	PBY42	506	3	0700	0700			Redding/ Ruth	
13. TOTALS		05		05							
14. AIR OPERATIONS SUPPORT EQUIPMENT										15. PREPARED BY (Include Date & Time)	

## SPECIAL INSTRUCTIONS

### WILDERNESS BOUNDARY DOZER LINE CONSTRUCTION CRITERIA & MITIGATION

10/05

#### Day Operational Period

1. Dozer lines no wider than necessary; never more than 3 blades wide.
2. No dozer berms or piles; feather edges.
3. Leave trees in line where possible to prevent freeway appearance; concept is to break up the canopy.
4. After fire - water bar dozer/handlines. Pile cut vegetation back into dozer line from outside after fire has been classified controlled.
5. Handline in areas where slopes exceed 40%.
6. Where possible, keep dozer line outside wilderness boundary.
7. Same concept for safety zones (islands) - leave vegetation to prevent freeway appearance.
8. After fire, rehabilitation is done with small dozers and hand rehabilitation.

#### ADDITIONAL INSTRUCTIONS

1. Flush cut stumps - brush too!
2. All trash comes out.
3. Keep impact from camps to a minimum.
4. HELISPOTS NEED ADVANCE APPROVAL FROM THE AIR SUPPORT GROUP SUPERVISOR!
5. Keep sanitation facilities away from water sources.

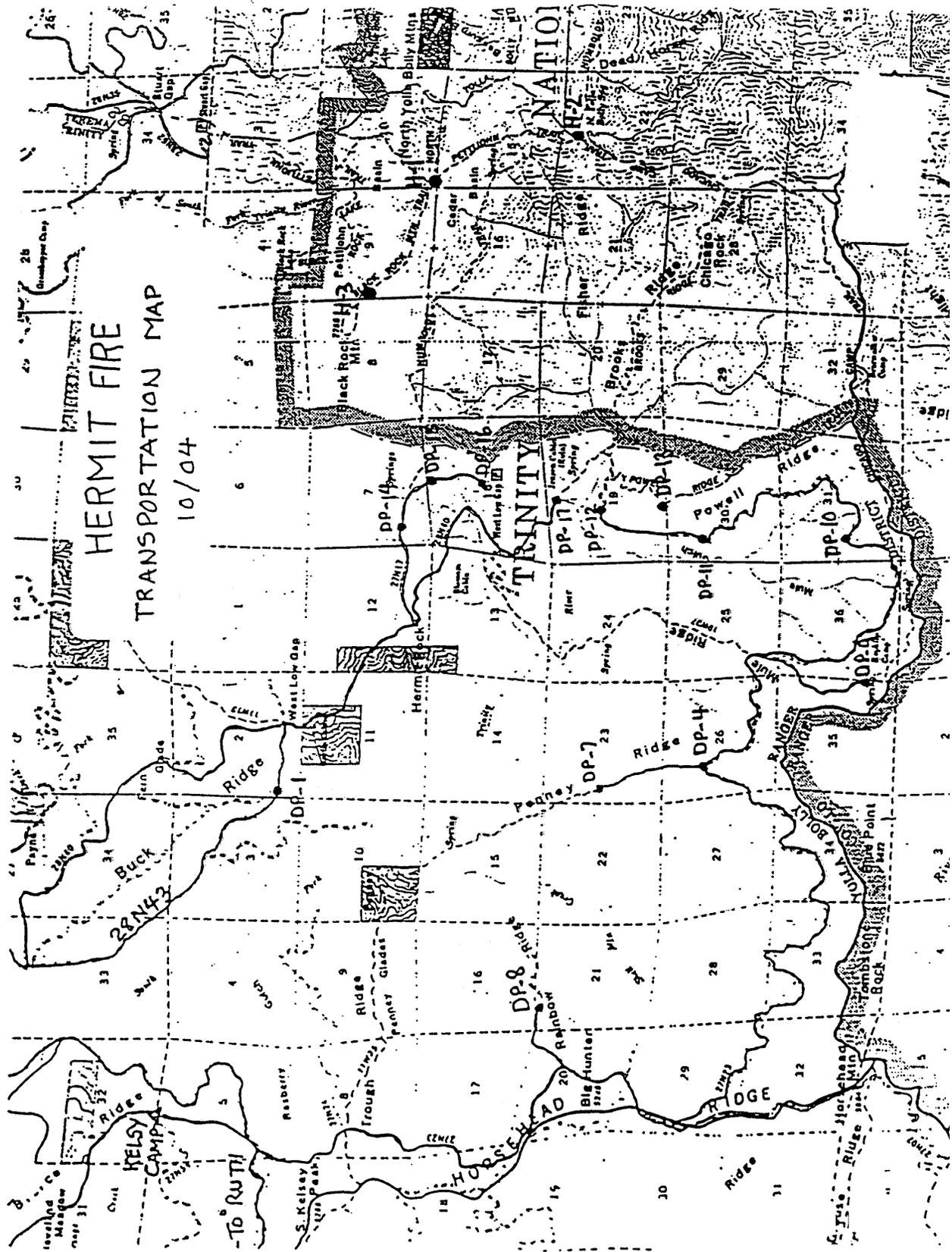
HERMIT FIRE  
HUMAN RESOURCE MESSAGE  
OPERATIONAL PERIOD 10/05

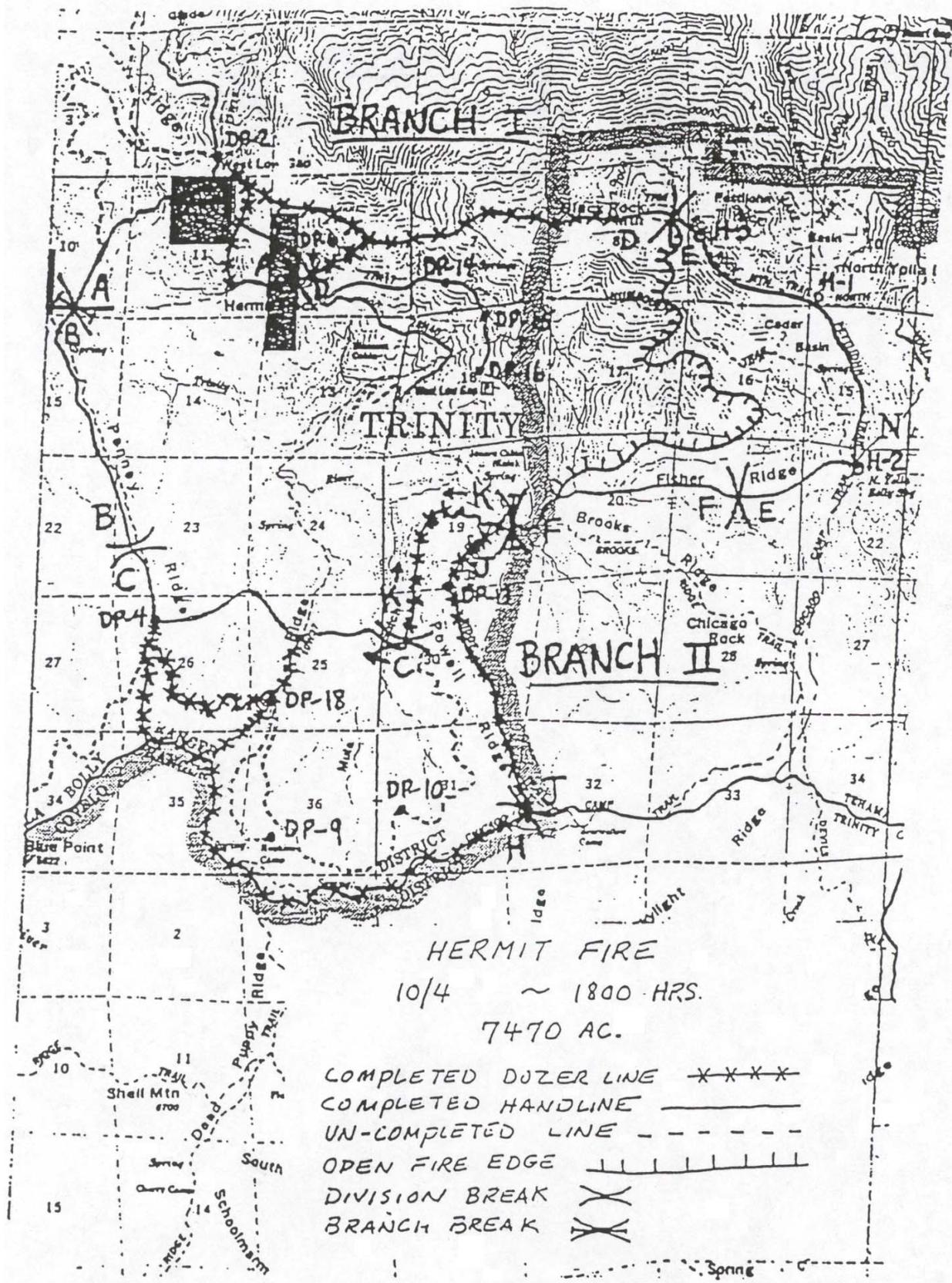
CIVIL RIGHTS ARE LAW. If you feel that you have been discriminated against because of RACE, COLOR, RELIGION, SEX (including sexual harassment), AGE (over forty), NATIONAL ORIGIN, PHYSICAL OR MENTAL HANDICAP, you have the RIGHT and RESPONSIBILITY to do something about it. Your first contact should be your immediate supervisor. As your EEO counselor, I am available also to assist you if you feel that you need further help.

Please feel free to ask me questions. I plan on being in the Medical Unit area from 0730 to 0830 and again from 2000 to 2100 each day.

Joe Barnone  
EEO/Civil Rights Counselor







COURSE: Crew Boss (Single Resource), S-230

UNIT 3: Exercise 1 - **SOLUTION**

Directions:

1. Refer students to Exercise 1 and allow 20 minutes for completion.
2. Emphasize that the importance of filling out a ICS 214, Unit Log is to capture the main events during the operational period.

Use the following narrative to complete an ICS 214:

You are the Crew Boss of the Pecos River #1 crew. The division supervisor (DIVS) wants you to keep a ICS 214.

The date is August 20, and it is now 0430. You are on your way to an operational period briefing for the Rocky Point fire. At the briefing you learn that your assignment is in Division D and the crew is going to cut and hold line. This division has four more crews, one strike team of engines, and one strike team of dozers assigned.

You get transportation and arrive at the drop point 3 at 0645. You walk to work, arrive on the work site at 0830, and your crew starts cutting fireline. At 1000, Division D calls and informs you that she wants a progress report at 1300. Everything is running smoothly; all five crews are working, leapfrogging, and constructing line. The engine strike team is installing a hose lay along the fireline to support a firing operation that will begin at 1600.

You break your crew at 1200 for lunch and start up again at 1230. At 1255, one of your sawyers cuts his swamper on the arm. The swamper is bleeding profusely. The emergency medical technician (EMT) on the crew is able to slow down the bleeding while you contact the DIVS. She arranges for a medevac and the crews quickly cut a helispot. Your EMT and injured swamper arrive at the helispot as the medevac helicopter is landing. The injured swamper and EMT are airborne to the hospital at 1325.

At 1330 the DIVS calls for the progress report. You inform her that the work is progressing at the scheduled pace and there should not be a problem meeting the 1600 time frame for the firing operation.

At approximately 1350, you ask one of your crew members to take the weather observations. The readings are: wet bulb 62, dry bulb 95, RH 12%, wind SW at 11 miles per hour. At 1430, the fire intensity increases and the fire makes a major run at your indirect fireline. The fire easily crosses your line and continues on. All resources on the division regroup and start chasing the fire. Finally, at 1930, you and the rest of the division are able to pinch off the head and tie the sloopover back into the main fire.

The night operational period personnel arrive at 2000 and you and your crew head back to the incident base on a school bus. At 2030, eight miles from base, the bus gets a flat tire. You call communications for assistance and they send a service vehicle. The mechanic arrives at 2145 and quickly repairs the tire. You arrive at the incident base at 2230. The kitchen is not open so the crew gets sack lunches while you complete time and accident forms. The squad bosses turn in tools and at 2330 you go to bed.

Discuss the ICS 214s the students have completed.

**Refer to the completed ICS 214, Unit Log on the next page and hand out 03-01-S230-HO.**





COURSE: Crew Boss (Single Resource), S-230

UNIT 3: Exercise 2 - **SOLUTION**

Directions:

1. Refer students to Exercise 2 and direct them to work in groups. Assign each group a crew from the Incident Action Plan (IAP) they reviewed earlier.
2. Students are to develop a list of logistical concerns or needs that must be addressed to ensure the crew is able to function safely and effectively throughout the operational period. Each group will be given a different assignment with differing logistical needs (coyote, firing, fireline construction through heavy fuels, mop up, staging for initial attack).
3. Write answers on a flip chart and elect a spokesperson to present your groups solutions.
4. Allow 10 minutes for completion.

Based on your crew's assignment, list the important preparations and information you will need to address, both prior to and during the assignment.

Plumas Regulars (Division E):

- **Task books as needed**
- **LCES addressed**
- **Qualified personnel for assignment**
- **Coordination with other crew and resources**
- **Special equipment needs**
- **Limitations on personal gear**
- **Re-supply SOPs**
- **Good map**
- **Proposed line location and distance to cover**
- **Tactical objective clearly understood**
- **Identification of gear drop points**
- **Expected number of operational periods before returning to base**
- **Any special instructions/concerns from management**

Lassen Regulars (Division E):

- **Task books as needed**
- **LCES addressed**
- **Assigned to fire or hold**
- **Qualified personnel for assignment**
- **Coordination with other crews and resources**
- **Equipment needs**
- **Supply points and re-supply SOPs**
- **Good map**
- **Distance to cover**
- **Problem areas along line**
- **Relief crews assigned (“hotline hand-off,” extended shift for your crew, or abandon line at end of shift)?**
- **Air support available (and how quickly)?**

Modoc #12 (Division B):

- **Task books as needed**
- **LCES addressed**
- **Good map**
- **Coordination with other crew and engine**
- **Crew’s assigned work area**
- **Exact location of pump site (likely near B/A break)**
- **Equipment needs**
- **Equipment and supply ordering SOPs**
- **Long line qualified personnel needed/available**
- **Bucket support available**
- **Special concerns (environmental)**
- **Will next operational period personnel be using the same equipment?**

Six Rivers #4 (Division C):

- **Task books as needed**
- **LCES addressed**
- **Map, preferably broken into grid location**
- **Coordinate with other crew and fallers**
- **Crew grid or spot patrol teams**
- **Backpack pumps on site? Take with? To be delivered?**
- **Long line qualified personnel available**
- **Bucket support available**

Taos #7 (Group H):

- **Task books as needed**
- **LCES addressed**
- **Specific objectives understood and work instructions received from group H supervisor, including location(s)**
- **Special equipment needs**

Pike Regulars (Ruth Helibase):

- **Task books as needed**
- **Number of IA teams required**
- **Capabilities of IA teams**
- **Qualified ICT4s for each team**
- **Equipment needs**
- **Communication SOPs**
- **Good maps**
- **IA checklist**
- **Method(s) of transport**
- **Flight manifest(s)**
- **Re-supply SOPs**
- **Coordination needs with other assigned IA resources**
- **Available support (air tankers, buckets)**
- **Any special management concern/instructions from the IA division group supervisor**

## **COMMON THEMES THAT SHOULD SURFACE FROM EACH GROUP:**

- **Have personnel welfare and life safety concerns been appropriately evaluated and planned for? (Stress safety zones and escape routes.)**
- **Is the need/concern viable? (Is it a true need/concern?)**
- **Can the need/concern be logistically satisfied or accomplished?**
- **What is the relative level of importance of the need/concern compared to other logistical activities occurring on the incident (high, medium, or low)?**
- **Are contingency plans developed for operating without needs/concerns being met?**

COURSE: Crew Boss (Single Resource), S-230

UNIT 3: Exercise 3 - **SOLUTION**

Directions:

1. Refer students to Exercise 3 and direct them to work in groups.
2. Inform the students that they have been put in a situation where they have limited time to conduct a crew briefing. Have them list on a flip chart the essential topics they must address.
3. After 5 minutes, solicit lists from several of the groups and record the information on a flip chart.
4. Hand out the school solution and discuss why certain items should be considered essential and why others are not. Give ownership to the individual groups (i.e., why one group included some items but not others).

**Situation**

- Terrain
- Fuels
- Weather
- Fire behavior

**Mission/Execution**

- Assignment

**Communications**

- Frequency

## **Service/Support**

- Other resources

## **Risk Management**

- Identify hazards
- LCES
- Anchor points
- Trigger points

**Any questions or concerns?**

**UNIT 3 QUIZ  
ANSWER KEY**

1. A crew has just arrived at the incident base. What should the Crew Boss do now?
  - a. Hold a short briefing and delegate appropriate authority.
  - b. Tell them you are going to find out what's going on and that you'll find them later.
  - c. Designate certain crew members to help you obtain information and decide on a meeting time and place.
  - d. a and c**
  - e. All of the above
  
2. En route to the Huck Finn fire, the Mark Twain Dispatch Center informs a Crew Boss to check in on Division A. What factors would the Crew Boss need to know at this time?
  - a. Radio frequency
  - b. The operations section chief's name
  - c. Location of the drop points
  - d. Specific travel directions
  - e. a and d**
  
3. List five important questions that need to be answered when receiving a briefing or assignment.
  - **Who**
  - **What**
  - **When**
  - **Where**
  - **Why**

4. Upon arrival at an incident, a Crew Boss is told to go to Division B and meet with the DIVS Smith on road No. 211 at the Beaver Dam. What should the Crew Boss do?
  - a. Get supplies and head for the dam.
  - b. Ask for a map and radio frequencies.
  - c. **Request more information specific to the assignment.**
  - d. a and b.
  
5. This morning's inversion will not allow the OSC1 to fly into camp for a briefing. The DIVS informs everyone in camp to go on the line and use yesterday's Incident Action Plan (IAP). What should be the Crew Boss's primary concern?
  - a. **Current situation status**
  - b. Expected duration of assignment
  - c. Human resource message
  - d. Long range weather forecast
  
6. What components of the IAP are most important to the Crew Boss?
  - a. Organization assignment list and weather message.
  - b. Incident objectives, safety message and air operations plan.
  - c. Division assignment list and medical plan.
  - d. Communication plans and map.
  - e. **All of the components of the IAP are equally important.**
  
7. Why should division assignment lists for other crews be of interest to a Crew Boss?
  - a. To see if work is fairly divided among crews.
  - b. To locate other crews from your own region.
  - c. To get radio frequencies and contact names.
  - d. **To coordinate with adjoining forces.**

8. What significance are the special instructions to the Crew Boss on the division assignment list?
- Can help plan intra-crew assignments.
  - Give items for consideration in crew briefing.
  - Can help in tactical planning.
  - All of the above**
  - a and c
9. After the morning briefing, you are informed that your assignment has changed. Instead of patrolling completed fireline in Division A, you will be assigned to Division B as part of a large firing operation. What is the first thing you will need to do?
- Meet with the DIVS of an adjoining division to discuss your new assignment.
  - Reassess your equipment needs and adjust accordingly.
  - Meet with your new DIVS for briefing.**
  - All of the above.
10. While en route to DP5 on Division A for an assignment, the OSC1 calls a Crew Boss on the radio and requests the crew to divert to Division C, DP10. Prioritize the following actions the Crew Boss should take:
- Ask OSC1 if Division A is aware of this change.
  - Pull out IAP map and figure out how to get to DP10.
  - Look up the radio frequency for Division C and make contact with the DIVS.
  - Brief the crew.
- a**
  - c**
  - b**
  - d**

11. During the morning briefing, a Crew Boss learns the crew will burn out a large area of completed fireline. The crew has only one case of fuses. What should the Crew Boss do?
- a. Request a different assignment more suited to the crew's ability.
  - b. Take the fuses available and try to get re-supplied on the fire line.
  - c. **Accept the assignment with the DIVS and obtain the appropriate supplies.**
  - d. Continue rehabilitating the fireline previously built on the division.
12. After assessing the proposed assignment (from the scenario above), the Crew Boss feels the crew does not have the expertise to accomplish this firing operation. What should the Crew Boss do?
- a. **Consult with the DIVS and request a different assignment more suited to the crew's ability.**
  - b. Use the available supplies to burn out a small section of line on the division.
  - c. Accept the assignment even with the lack of expertise and use it as a training opportunity.
  - d. Have the crew group up together until the DIVS makes a decision on what the assignment will be.
13. List the six essential items a Crew Boss should pass on to the crew during an initial briefing, prior to going to the line:
- |                            |                                     |
|----------------------------|-------------------------------------|
| • <b>Situation</b>         | • <b>Service/Support</b>            |
| • <b>Mission/Execution</b> | • <b>Risk Management</b>            |
| • <b>Communications</b>    | • <b>Any questions or concerns?</b> |

**UNIT 4 - FIRELINE OPERATIONS**

**THIS UNIT CONTAINS THE FOLLOWING LESSONS:**

**LESSON 4A - RISK MANAGEMENT**  
**LESSON 4B - ENTRAPMENT AVOIDANCE**  
**LESSON 4C - SAFETY AND TACTICS**



## **UNIT 4 – FIRELINE OPERATIONS**

### **LESSON 4A – RISK MANAGEMENT**

#### **INSTRUCTOR NOTES**

The students who attend this course may have varied backgrounds and experience levels; therefore, the instructors who teach this unit must be open to more than one way of performing the task of risk management. It is important to encourage the students to discuss items thoroughly and that differences of opinion are acceptable.



## DETAILED LESSON OUTLINE

- COURSE: Crew Boss (Single Resource), S-230
- UNIT: 4 – Fireline Operations
- LESSON: 4A – Risk Management
- TIME: 1 Hour
- TRAINING AIDS: Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers.
- OBJECTIVES: Upon completion of this lesson, students will be able to:
1. Identify the five steps of the risk management process.
  2. Apply the five step risk management process to given scenarios.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	4A-01-S230-EP
<b>PRESENT LESSON OBJECTIVES.</b>	4A-02-S230-EP
<b>ENSURE ALL STUDENTS FULLY UNDERSTAND THE LESSON OBJECTIVES.</b>	
<p data-bbox="190 600 821 632"><b>I. RISK MANAGEMENT PROCESS</b></p> <p data-bbox="285 688 1084 814">The risk management process is beneficial in making operational decisions. Following this process ensures you have considered:</p> <ul data-bbox="285 867 1049 1083" style="list-style-type: none"> <li data-bbox="285 867 1049 905">• The primary components of the environment.</li> <li data-bbox="285 957 529 995">• The risks.</li> <li data-bbox="285 1047 902 1085">• Applying controls to mitigate risks.</li> </ul>	4A-03-S230-EP
<p data-bbox="190 1136 919 1167"><b>II. FIVE STEPS OF RISK MANAGEMENT</b></p> <p data-bbox="285 1224 800 1262"><b>A. Step 1: Situation Awareness</b></p> <ol data-bbox="383 1314 1068 1566" style="list-style-type: none"> <li data-bbox="383 1314 1068 1394">1. Situation awareness is the foundation of the risk management process.</li> <li data-bbox="383 1446 1036 1566">2. Without a good understanding of the situation, it is difficult to make a good decision.</li> </ol>	4A-04-S230-EP
<ol data-bbox="383 1623 878 1839" style="list-style-type: none"> <li data-bbox="383 1623 878 1839">3. Situation awareness sizeup: <ul data-bbox="480 1713 821 1839" style="list-style-type: none"> <li data-bbox="480 1713 821 1751">• Who is in charge</li> <li data-bbox="480 1803 732 1841">• Objectives</li> </ul> </li> </ol>	4A-05-S230-EP

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Tactical instructions</li> <li>• Communications</li> <li>• Gather information: <ul style="list-style-type: none"> <li>- Weather (current/forecasted)</li> <li>- Previous fire behavior</li> <li>- Current fire behavior</li> <li>- Known hazards</li> <li>- Local factors</li> <li>- Access/egress</li> <li>- Fuels</li> </ul> </li> <li>• Scout the fire</li> </ul>	
<p>B. Step 2: Hazard Assessment</p> <ol style="list-style-type: none"> <li>1. Estimate potential fire behavior hazards. <ul style="list-style-type: none"> <li>• Look up/down/around indicators</li> </ul> </li> <li>2. Identify tactical hazards. <ul style="list-style-type: none"> <li>• Watch out situations</li> <li>• Wildland/Urban Interface Watch Outs</li> </ul> </li> </ol>	<p>4A-06-S230-EP</p>

OUTLINE	AIDS & CUES
<ol style="list-style-type: none"> <li>3. What other safety hazards exist?</li> <li>4. Consider severity vs. probability.</li> </ol>	
<p>C. Step 3: Hazard Control</p> <ol style="list-style-type: none"> <li>1. Establish anchor points and LCES.</li> <li>2. Establish other hazard control measures (Downhill Line Construction Guidelines, Standard Firefighting Orders, Entrapment Avoidance).</li> </ol>	4A-07-S230-EP
<p>D. Step 4: Decision Point</p> <ol style="list-style-type: none"> <li>1. Are controls in place? <ul style="list-style-type: none"> <li>• No, reassess the situation</li> <li>• Yes, next question</li> </ul> </li> <li>2. Are tactics based on fire behavior? <ul style="list-style-type: none"> <li>• No, reassess the situation</li> <li>• Yes, next question</li> </ul> </li> <li>3. Have instructions been given and understood? <ul style="list-style-type: none"> <li>• No, reassess the situation</li> <li>• Yes, next question</li> </ul> </li> </ol>	4A-08-S230-EP

OUTLINE	AIDS & CUES
<p>4. Decision Point: Go/No Go</p> <ul style="list-style-type: none"> <li>• Are all identified risks mitigated?</li> <li>• Do the strategies and tactics make sense to you?</li> <li>• Has a briefing been given with feedback opportunity?</li> </ul>	4A-09-S230-EP
<p>E. Step 5: Evaluate</p> <p>1. Personnel</p> <ul style="list-style-type: none"> <li>• Low experience levels with local factors?</li> <li>• Distracted from primary tasks?</li> <li>• Fatigue or stress reactions?</li> <li>• Hazardous attitude?</li> </ul>	4A-10-S230-EP
<p>2. What is changing?</p>	4A-11-S230-EP
<p>3. Are strategy and tactics working?</p>	

OUTLINE	AIDS & CUES
<p><b>EXERCISE:</b></p> <ol style="list-style-type: none"> <li><b>1. IN THEIR ASSIGNED GROUPS, HAVE STUDENTS VIEW THE ELECTRONIC PRESENTATION SLIDES (WHICH THEY CAN REFER TO ON PAGES 4A.7 - 4A.9 OF THEIR STUDENT WORKBOOKS).</b></li>   <li><b>2. STUDENTS ARE TO IDENTIFY THE FOLLOWING ON EACH SLIDE:</b> <ul style="list-style-type: none"> <li>• <b>HAZARDS</b></li> <li>• <b>FIRE BEHAVIOR</b></li> <li>• <b>TACTICAL OPTIONS</b></li> <li>• <b>SAFETY CONCERNS</b></li> <li>• <b>WATCH OUT SITUATIONS</b></li> </ul> </li>   <li><b>3. ALLOW 3 MINUTES FOR STUDENTS TO ASSESS EACH SCENARIO. HAVE STUDENTS RECORD THEIR FINDINGS FROM EACH SLIDE ONTO A FLIP CHART FOR PRESENTATION TO THE CLASS.</b></li> </ol>	<p>4A-12-S230-EP</p> <p>4A-13-S230-EP thru 4A-18-S230-EP SW pages 4A.7 - 4A.9</p>
<p><b>REVIEW LESSON OBJECTIVES.</b></p>	<p>4A-19-S230-EP</p>

## **UNIT 4 – FIRELINE OPERATIONS**

### **LESSON 4B – ENTRAPMENT AVOIDANCE**

#### **INSTRUCTOR NOTES**

The students who attend this course may have varied backgrounds and experience levels; consequently, the instructors who teach this unit must be open to more than one way of performing the task of entrapment avoidance. It is important to encourage the students to discuss items thoroughly and that differences of opinion are acceptable.



## DETAILED LESSON OUTLINE

- COURSE:** Crew Boss (Single Resource), S-230
- UNIT:** 4 – Fireline Operations
- LESSON:** 4B – Entrapment Avoidance
- TIME:** 2 Hours
- TRAINING AIDS:** Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers; Incident Response Pocket Guide.
- OBJECTIVES:** Upon completion of this lesson, students will be able to:
1. Describe the role LCES has in the risk management process.
  2. Describe a protocol for negotiating a perceived unsafe assignment.
  3. Given a set of fireline conditions, identify valid trigger point(s).
  4. Define levels of engagement.
  5. Describe a procedure for recognizing escape routes and safety zones when engaging a fire.
  6. Given a set fireline condition, estimate minimum safety zone size using the Missoula Fire Lab model.
  7. Identify human factors that contribute to fireline decision errors.
  8. Given a fire scenario, determine the appropriate level of engagement as conditions change.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	4B-01-S230-EP
<b>PRESENT LESSON OBJECTIVES.</b>	4B-02-S230-EP thru 4B-04-S230-EP
<b>INFORM THE STUDENTS THAT THIS UNIT WILL REFER TO SECTIONS OF THE IRPG.</b>	
I. <b>ENTRAPMENT AVOIDANCE</b>	4B-05-S230-EP
<p data-bbox="284 688 1079 730">A.    <u>Loop Fire</u>, Angeles National Forest, 11-1-1966.</p> <p data-bbox="378 779 1128 1079">Crew was attempting to finish a 200' section of line, downhill, between Division A and Division C. This was the final action necessary to contain the fire. It was estimated that the fire flashed through the 2,200' chimney canyon in less than one minute. Twelve Forest Service hotshot crew members lost their lives.</p>	
<p data-bbox="378 1136 1027 1171">What skills do we use to avoid entrapment?</p> <ul data-bbox="378 1224 1096 1751" style="list-style-type: none"> <li data-bbox="378 1224 1073 1260">•    Ability to gain good situation awareness.</li> <li data-bbox="378 1312 966 1348">•    Ability to anticipate fire behavior.</li> <li data-bbox="378 1400 1034 1478">•    Ability to select effective strategy and tactics.</li> <li data-bbox="378 1530 1073 1608">•    Ability to make decisions about when to engage a fire.</li> <li data-bbox="378 1661 1096 1738">•    Ability to recognize good safety zone and escape route opportunities.</li> </ul> <p data-bbox="378 1801 1073 1879">The focus of this lesson will be on the last two skills.</p>	4B-06-S230-EP



OUTLINE	AIDS & CUES
<p>B. Risk Decision for Engaging a Fire</p> <p>The three courses of action that follow the decision point:</p> <ul style="list-style-type: none"> <li>• Engage fire with planned assignment.</li> <li>• Negotiate assignment.</li> <li>• Turn down assignment.</li> </ul>	4B-10-S230-EP
<p>C. Rules of Engagement</p> <p>Defined rules of engagement have been a part of firefighting doctrine since 1958.</p> <p>For better or worse, firefighting has become more complex and so have the rules of engagement.</p>	4B-11-S230-EP
<p>D. Risk Management</p> <p>The risk management process is simply a procedural approach to using the rules of engagement that you already know.</p> <p>This process provides the criteria to support your decision-making on the fireline.</p>	4B-12-S230-EP
<p><b>REFER THE STUDENTS TO THE “RISK MANAGEMENT PROCESS” IN THE IRPG.</b></p>	

OUTLINE	AIDS & CUES
<p><b>SOLICIT ANSWERS TO THE FOLLOWING QUESTIONS.</b></p> <p>1. What about LCES?</p> <ul style="list-style-type: none"> <li>• Is LCES all you need to know? <ul style="list-style-type: none"> <li>– LCES is one part of the rules of engagement.</li> </ul> </li> <li>• How does LCES relate to the Standard Firefighting Orders? <ul style="list-style-type: none"> <li>– L,C,E, and S are the key operational actions that are in the Standard Firefighting Orders.</li> </ul> </li> <li>• What role does LCES have in the risk management process? <ul style="list-style-type: none"> <li>– LCES is the minimum level of hazard control that must be in place before making the decision to engage a fire.</li> </ul> </li> </ul> <p>2. Right to know</p> <p>Federal law says all workers have the right to know about the hazardous materials they work around. What questions do all firefighters have the right to know the answers to?</p> <ul style="list-style-type: none"> <li>• What are the hazards I face?</li> </ul>	<p>4B-13-S230-EP</p> <p>4B-14-S230-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Where do I go to be safe from those hazards?</li> <li>• How do I get there?</li> <li>• When should I go there?</li> </ul> <p>3. Is there legitimate dissent?</p> <ul style="list-style-type: none"> <li>• Do leaders have a responsibility to protect their firefighters from unnecessary risk?</li> <li>• Have you ever been given a fire assignment that you thought was unsafe or excessively risky?</li> <li>• How did you resolve that situation?</li> <li>• How do you properly refuse risk?</li> </ul>	<p>4B-15-S230-EP</p>
<p><b>REFER TO “HOW TO PROPERLY REFUSE RISK” IN THE IRPG.</b></p>	
<p>E. Risk Decision for Changing Situations</p>	<p>4B-16-S230-EP</p>
<p><b>POINT OUT TRIGGER POINTS AS THE KEY CONCEPT THAT IS ADDRESSED NEXT.</b></p>	
<ol style="list-style-type: none"> <li>1. A pre-identified or anticipated event (time, place, or condition), that when it occurs, initiates a pre-planned response.</li> <li>2. Hitting a trigger point means stop, evaluate the situation, and make a decision.</li> </ol>	<p>4B-17-S230-EP</p>



OUTLINE	AIDS & CUES
<p>b. Fire operations</p> <ul style="list-style-type: none"> <li>• Loss of lookout.</li> <li>• Loss of communication.</li> <li>• Escape time increases.</li> <li>• Failure to complete fireline by a specified time of day.</li> <li>• Air support diverted.</li> <li>• Excessive fatigue.</li> </ul>	
<p>5. Are all trigger points created equal?</p> <p>Trigger points will vary by geographic area and fuel type. What things should you do on a fire so you are able to identify valid trigger points?</p> <ul style="list-style-type: none"> <li>• Get a good briefing.</li> <li>• Seek local expertise if you do not have it.</li> <li>• Take weather observations on a regular basis.</li> <li>• Find out if there are predictive tools being used.</li> </ul>	<p>4B-20-S230-EP</p>

OUTLINE	AIDS & CUES
<p>6. Using trigger points.</p> <ul style="list-style-type: none"> <li>• Establish trigger point(s) when potential exists for your fire situation to degrade.</li> <li>• Ensure that your situation awareness includes monitoring factors that relate to the trigger point(s) you set.</li> <li>• Have a planned response in place for your actions when a trigger point is hit.</li> <li>• Do not ignore a trigger point that has been hit!</li> </ul>	<p>4B-21-S230-EP</p>
<p><b>ADMINISTER EXERCISE 1: USING TRIGGER POINTS.</b></p>	<p>4B-22-S230-EP IG p. 4B.29</p>
<p><b>1. DIVIDE STUDENTS INTO GROUPS OF 4-5 AND REFER THEM TO PAGE 4B.10 OF THEIR STUDENT WORKBOOK. HAVE THEM WORK AS TEAMS TO ANSWER THE EXERCISE QUESTION. GROUPS WILL ELECT A SPOKESPERSON TO PRESENT THEIR ANSWERS.</b></p>	<p>4B-23-S230-EP thru 4B-25-S230-EP SW p. 4B.10</p>
<p><b>2. ALLOW 10 MINUTES FOR COMPLETION.</b></p>	
<p><b>3. ASK SEVERAL OR ALL OF THE GROUPS TO PRESENT THEIR ANSWERS.</b></p>	
<p><b>4. REVIEW THE EXERCISE SOLUTION AND CLARIFY ANY POINTS THE STUDENTS MAY HAVE MISSED.</b></p>	<p>4B-26-S230-EP</p>

OUTLINE	AIDS & CUES
<p>F. Levels of Engagement</p> <p>1. What do you do when a trigger point is hit?</p> <ul style="list-style-type: none"> <li>• Validate continuing with full engagement of the fire, or</li> <li>• Implement your pre-planned response.</li> </ul> <p><b>POINT OUT THE FOUR LEVELS OF ENGAGEMENT LISTED BELOW DECISION POINT.</b></p> <p>2. Decision point</p> <ul style="list-style-type: none"> <li>• Continue full engagement</li> <li>• Hold in place</li> <li>• Change tactics</li> <li>• Withdraw</li> </ul> <p><b>SOLICIT THOUGHTS FROM THE STUDENTS FOR THE FOLLOWING MILITARY DRAW-D CONCEPT. IMPORTANT NOTE: THIS IS A CONCEPT ONLY; NOT ANOTHER ACRONYM TO REMEMBER!</b></p>	<p>4B-27-S230-EP</p>
<p>3. DRAW-D Concept</p>	<p>4B-28-S230-EP</p>
<p>a. Defend</p> <ul style="list-style-type: none"> <li>• Hold and improve the line.</li> <li>• Buys time to reassess.</li> <li>• Fireline can be improved.</li> <li>• Troops can regroup.</li> <li>• Patrol and mopup.</li> <li>• Structure protection.</li> </ul>	<p>4B-29-S230-EP</p>

OUTLINE	AIDS & CUES
<p>b. Reinforce</p> <ul style="list-style-type: none"> <li>• Add resources necessary to advance or defend.</li> <li>• Order additional personnel and equipment.</li> <li>• Assist resources already on the fireline.</li> </ul>	4B-30-S230-EP
<p>c. Advance</p> <ul style="list-style-type: none"> <li>• Direct/Indirect attack or active burn out operations.</li> <li>• Direct versus indirect line can be considered.</li> <li>• Firing operations.</li> </ul>	4B-31-S230-EP
<p>d. Withdraw</p> <ul style="list-style-type: none"> <li>• Abandon established position in response to influences adversely affecting the ability to advance or defend.</li> <li>• Move directly to a safety zone.</li> <li>• Certain situations may require crews to drop gear in order to move faster.</li> </ul>	4B-32-S230-EP

OUTLINE	AIDS & CUES
<p>e. Delay</p> <ul style="list-style-type: none"> <li>• Wait for conditions to meet pre-identified triggers necessary to advance or defend.</li> <li>• Gather information to ensure good situational awareness.</li> <li>• Consult with others.</li> <li>• Hold in place for improved conditions.</li> </ul>	<p>4B-33-S230-EP</p>
<p>4. Leader's responsibilities</p> <p>What responsibilities do leaders have when they initiate a change in the level of engagement on a fire?</p> <ul style="list-style-type: none"> <li>• Communicate a clear change order to you firefighters.</li> <li>• Account for all your firefighters.</li> <li>• Ensure your firefighters change engagement as planned.</li> <li>• Communicate the information to adjacent resources and up the chain of command.</li> </ul>	<p>4B-34-S230-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Ensure an experienced firefighter with a radio is the last person out during a withdrawal (most possibly you).</li> <li>• Reassess the situation and re-brief before re-engaging the fire.</li> </ul>	
<p>III. RECOGNITION</p>	<p>4B-35-S230-EP</p>
<p>A. Escape Route and Safety Zone Recognition</p> <p>We have been talking about decision-making.</p> <ul style="list-style-type: none"> <li>• When to engage the fire?</li> <li>• When to withdraw?</li> </ul> <p>How do we recognize effective escape routes and safety zones so we can make those decisions?</p>	<p>4B-36-S230-EP</p>
<p>B. A Process to Use</p> <ul style="list-style-type: none"> <li>• Observe the area</li> <li>• Visualize fire spread</li> <li>• Identify valid safety zones</li> <li>• Inform others</li> <li>• Evaluate conditions</li> </ul>	<p>4B-37-S230-EP</p>
<p>1. Observe</p> <p>Personally observe potential safety zones and escape routes in the work area.</p>	<p>4B-38-S230-EP</p>
<p><b>REFER TO “STEP 1 - SITUATION AWARENESS” OF THE RISK MANAGEMENT PROCESS IN THE IRPG.</b></p>	

OUTLINE	AIDS & CUES
<p>2. Visualize</p> <p>Build a mental picture of the fire behavior you would expect if conditions existed that would enable a crown fire to burn around your potential safety zone.</p> <ul style="list-style-type: none"> <li>• Anticipate flame lengths.</li> <li>• Anticipate convective influences.</li> </ul> <p><b>THIS SLIDE IS OF THE BUTTE FIRE. THE ORIGINAL PLAN WAS TO CLEAR THIS AREA FOR A SAFETY ZONE. THIS SITE ENDED UP BEING A DEPLOYMENT SITE AND NOT A SAFETY ZONE.</b></p> <p><b>REFER TO “LOOK UP, DOWN, AND AROUND” IN THE IRPG.</b></p>	<p>4B-39-S230-EP</p>
<p>3. Identify</p> <p>Compare the fire behavior you visualize with the size and location of potential safety zones you observe in order to identify any true safety zones available.</p>	<p>4B-40-S230-EP</p>
<p>4. Time</p> <p>Have someone walk the route from the work location to the potential safety zone(s). They should identify any hazards and obstacles that would impede orderly and safe withdrawal to the safety zone.</p>	<p>4B-41-S230-EP</p>

OUTLINE	AIDS & CUES
<p>5. Inform</p> <p>Communicate the location and path of travel to those who work for you and around you.</p> <p>Flag or otherwise mark if the escape route or safety zone is not obvious.</p>	4B-42-S230-EP
<p>6. Evaluate</p> <p>You must continually evaluate your escape and safety plan to ensure that it will still work.</p> <ul style="list-style-type: none"> <li>• Time of day and fire intensity changes.</li> <li>• Tactical progress and travel distance changes.</li> </ul>	4B-43-S230-EP
<p><b>REFER TO “STEP 5 - EVALUATE” OF THE RISK MANAGEMENT PROCESS IN THE IRPG.</b></p> <p><b>SOLICIT ANSWERS FROM THE STUDENTS TO THE FOLLOWING QUESTIONS. BE PREPARED TO PROVIDE EXAMPLES OF EACH SAFETY ZONE TYPE.</b></p>	

OUTLINE	AIDS & CUES
<p>C. Safety Zone</p> <p>1. What is a safety zone?</p> <ul style="list-style-type: none"> <li>• Pre-planned before fire is engaged.</li> <li>• Sufficient size to mitigate anticipated heat impact for expected number of firefighters without fire shelter use.</li> <li>• Located away from hazardous terrain features.</li> <li>• Other hazards are mitigated (snags, rolling debris, vehicle traffic).</li> </ul> <p>2. What are the three primary types of safety zones?</p> <ul style="list-style-type: none"> <li>• The black: used for direct attack; should be your first choice. Clean, free of unburned fuels.</li> <li>• Natural features: used for direct and indirect attack.</li> <li>• Constructed sites: used primarily for indirect attack and urban interface fires.</li> </ul> <p><b>BE PREPARED TO PROVIDE EXAMPLES OF THE THREE PRIMARY TYPES OF SAFETY ZONES.</b></p>	<p>4B-44-S230-EP</p> <p>4B-45-S230-EP</p>

OUTLINE	AIDS & CUES
<p>3. Location, location, location.</p> <ul style="list-style-type: none"> <li>• Heavy fuels?</li> <li>• Down wind?</li> <li>• Above the fire, in a chimney or in a saddle?</li> <li>• Fine fuels and burn out?</li> <li>• Flank of the fire?</li> <li>• Lowest ground?</li> </ul>	<p>4B-46-S230-EP</p>
<p>4. Radiant vs. convective heat.</p> <p>Convective influences can push lethal heat to surprising distances and increase safety zone size requirements. What are these influences?</p> <ul style="list-style-type: none"> <li>• Wind and fire whirl activity.</li> <li>• Lifting effect of steep slopes.</li> <li>• Channeling effect of chimneys, saddles, and narrow canyons.</li> </ul>	<p>4B-47-S230-EP</p>

OUTLINE	AIDS & CUES
<p>5. Estimating safety zone size.</p> <ul style="list-style-type: none"> <li>• This model was developed by the Missoula Fire Lab.</li> <li>• This model considers the heat impact from radiant heat only, thus it provides a tool to estimate minimum safety zone size.</li> </ul>	4B-48-S230-EP
<p><b>ADMINISTER EXERCISE 2: ESTIMATING SAFETY ZONE SIZE.</b></p>	4B-49-S230-EP IG p. 4B.31
<p><b>1. DIVIDE THE STUDENTS INTO GROUPS OF 4-5 AND REFER THEM TO PAGE 4B.17 IN THEIR STUDENT WORKBOOK. HAVE THEM WORK AS TEAMS TO ANSWER THE EXERCISE QUESTION ON PAGE 4B.18. GROUPS WILL ELECT A SPOKESPERSON TO PRESENT THEIR ANSWERS.</b></p>	4B-50-S230-EP thru 4B-53-S230-EP SW p. 4B.17 - 4B.18
<p><b>2. ALLOW 10 MINUTES FOR COMPLETION.</b></p>	
<p><b>3. ASK SEVERAL OR ALL OF THE GROUPS TO PRESENT THEIR ANSWERS.</b></p>	
<p><b>4. REVIEW THE EXERCISE SOLUTION AND CLARIFY ANY POINTS THE STUDENTS MAY HAVE MISSED. REMEMBER, THIS IS ONLY A GUIDELINE THAT DOES NOT FACTOR IN SLOPE OR WIND.</b></p>	4B-54-S230-EP

OUTLINE	AIDS & CUES
<p>It's never black and white. This is only an exercise to get you to think about safety zone criteria. Everyone painted a different mental picture of this situation based on their experience. You should have considered the following:</p> <ul style="list-style-type: none"> <li>• Did you think about how much room you would need for all 80 firefighters and their vehicles?</li> <li>• Did you consider location in relation to head of the fire?</li> <li>• Did you consider the channeling effects of any significant topographic features?</li> <li>• Did you consider convective influences of wind?</li> </ul> <p>6. Requirements for an effective escape route.</p>	<p>4B-55-S230-EP</p>
<p>a. What are the requirements for an effective escape route?</p> <ul style="list-style-type: none"> <li>• Pre-planned before fire is engaged.</li> <li>• Escape time allows for a positive safety margin given the fire's anticipated rate of spread.</li> </ul>	<p>4B-56-S230-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Located so path of firefighter travel is away from the head of the fire.</li> <li>• No significant travel barriers (steep slopes, rocks, loose soils, dense vegetation).</li> </ul> <p>b. How do you calculate escape time?</p> <ul style="list-style-type: none"> <li>• Someone needs to walk it and time it.</li> <li>• Allow for at least 150% of an individual's travel time to determine escape time for a full crew or multiple crews.</li> <li>• Allow even more time for effects of fatigue later in the shift.</li> <li>• Remember the slowest person/equipment.</li> </ul>	4B-57-S230-EP
<p>c. Uphill escape routes.</p> <ul style="list-style-type: none"> <li>• Avoid steep uphill escape routes.</li> <li>• Firefighters travel rates are significantly slower.</li> <li>• Remember the smart firefighter knows that fire goes faster uphill and people go slower!</li> </ul>	4B-58-S230-EP

OUTLINE	AIDS & CUES
<p>7. Safety margin.</p> <p>Your safety margin is simply the time you estimate it will take the fire to spread to your location, minus your known escape time.</p> <p>This number needs to be a positive number!</p> <p>For example, if you estimate that the fire could spread to your location in 30 minutes and your escape time is 10 minutes, the calculation is <math>30 - 10 = +20</math>. Your safety margin is 20 minutes.</p>	<p>4B-59-S230-EP</p>
<p>a. Safety margin paradox:</p> <ul style="list-style-type: none"> <li>• Firefighter escape time will increase during the burning period (fireline progress and fatigue).</li> <li>• Fire rate of spread will increase during the burning period (typically warmer, drier, windier).</li> <li>• Safety margin will decrease.</li> <li>• Many fatalities have occurred because firefighters have waited too long to make the decision to leave (South Canyon).</li> </ul>	<p>4B-60-S230-EP</p>

OUTLINE	AIDS & CUES
<p>b. How far away from my safety zone can I be and still have a positive safety margin?</p> <ul style="list-style-type: none"> <li>• When fire environment conditions degrade you must shorten escape time or even go to a less aggressive level of engagement. Escape times of 5-10 minutes may be required.</li> <li>• When fire environment conditions improve you can increase your escape time and become more aggressive in the level of engagement. Escape times of 30-60 minutes may be acceptable.</li> </ul>	4B-61-S230-EP
<p>c. Adjusting LCES.</p> <ul style="list-style-type: none"> <li>• Narrow safety margins should be considered a standard trigger point.</li> <li>• Conditions on fires seldom remain constant, you may need to adjust any or all parts of your LCES system several times during a shift to reflect changing conditions.</li> </ul>	4B-62-S230-EP

OUTLINE	AIDS & CUES
IV. THE HUMAN FACTOR	4B-63-S230-EP
A. Escape and Safety Decision Paths	4B-64-S230-EP
<p>Listed below are the four possible escape and safety decision paths and the associated LCES errors.</p>	
1. Normal escape	
<ul style="list-style-type: none"> <li>• Safety zone; life is good.</li> </ul>	
2. Normal escape	
<ul style="list-style-type: none"> <li>• Inadequate safety zone; deploy fire shelter.</li> </ul>	
<ul style="list-style-type: none"> <li>- Safety zone size estimation error.</li> </ul>	
3. Escape cut off	
<ul style="list-style-type: none"> <li>• Select a deployment site; last resort survival.</li> </ul>	
<ul style="list-style-type: none"> <li>- Lookout observation error.</li> </ul>	
<ul style="list-style-type: none"> <li>- Communication of withdrawal alarm error.</li> </ul>	
<ul style="list-style-type: none"> <li>- Escape time estimation error.</li> </ul>	

OUTLINE	AIDS & CUES
<p>4. No escape route in place</p> <ul style="list-style-type: none"> <li>• Select a deployment site; last resort survival.</li> <li>- Failure to establish LCES.</li> </ul> <p>B. Fires do not Kill Firefighters</p> <ul style="list-style-type: none"> <li>• Firefighter decision errors kill firefighters.</li> <li>• As you have just seen, four things can happen when you have to implement your escape and safety plan; three of them are bad.</li> <li>• Your decision-making and communication skills as a leader will determine the outcome.</li> </ul> <p>C. Entrapments = Decision Errors</p>	<p>4B-65-S230-EP</p> <p>4B-66-S230-EP</p>
<p><b>SOLICIT ANSWERS FROM THE STUDENTS TO THE FOLLOWING QUESTIONS.</b></p>	
<p>1. Where do entrapments most frequently occur?</p> <ul style="list-style-type: none"> <li>• Indirect or downhill fireline construction.</li> <li>• Small fires escaping initial attack or isolated areas of large fires.</li> </ul>	

OUTLINE	AIDS & CUES
<p>2. Who is most frequently involved?</p> <ul style="list-style-type: none"> <li>• Firefighters with less than 2 years or more than 15 years of experience.</li> </ul> <p>3. When do entrapments typically happen?</p> <ul style="list-style-type: none"> <li>• During the burning period.</li> <li>• When the situation changes.</li> </ul> <p>4. Why do entrapments happen?</p> <ul style="list-style-type: none"> <li>• Low experience level with local factors.</li> <li>• Distraction, especially due to fatigue or stress.</li> <li>• Hazardous attitude.</li> </ul>	
<p>D. The Bottom Line</p> <p>The lesson was an opportunity for each of us to assess how we approach firefighter safety and a forum to learn from others.</p> <p>No rules, standards, policies, or checklists will ensure your safety on the fireline.</p> <p>Maintaining awareness of your situation and using fundamental firefighting methods are the foundation for safe and effective fireline operations.</p>	<p>4B-67-S230-EP</p>

OUTLINE	AIDS & CUES
<b>SOLICIT OTHER CONCLUSIONS TO THIS LESSON FROM THE STUDENTS.</b>	
<b>INAJA FATALITY FIRE MONUMENT - 1956. THE 10 STANDARD FIREFIGHTING ORDERS WERE DEVELOPED AFTER THIS TRAGEDY.</b>	4B-68-S230-EP
<b>REVIEW LESSON OBJECTIVES.</b>	4B-69-S230-EP thru 4B-71-S230-EP

COURSE: Crew Boss (Single Resource), S-230

LESSON 4B: Exercise 1 - **SOLUTION**

Directions:

1. Divide students into groups of 4-5 and refer them to page 4B.10 of their student workbook. Have them work as teams to answer the exercise question. Groups will elect a spokesperson to present their answers.
2. Allow 10 minutes for completion.
3. Ask several or all of the groups to present their answers.
4. Review the exercise solution and clarify any points the students may have missed.

Your Assignment:

It is August 23 and you have been dispatched as the initial attack Incident Commander for the Davis Fire. The fire is located in the Northern Rocky Mountains in Montana. You have a hotshot crew and two Type 3 engines assigned to you.

Local Factors:

Fires you have worked here in Montana over the last couple of weeks have burned quite actively after 1400. Today's weather forecast calls for maximum temperature near 90, minimum relative humidity 18-20%, and northwest winds to 15 mph.

Fire Situation:

You have arrived at the fire and have a safe anchor point to work from. The fire is about 3 acres. The fire currently has a moderate rate of spread in surface fuels. The time is 1030.

Question:

What are your trigger points?

**One possible answer:**

**Using the Look Up, Down and Around indicators in the Incident Response Pocket Guide you see that:**

- **Relative humidity below 25% is an indicator of low fuel moisture.**
- **Temperatures greater than 85 indicate high fuel temperature.**
- **Surface winds above 10 mph are significant.**
- **Spotting indicates problem fire behavior.**

**Using knowledge from previous assignments, you determine that if the above conditions materialize and you do not have the fire contained by 1300, you will reevaluate your strategy and tactics.**

COURSE: Crew Boss (Single Resource), S-230

LESSON 4B: Exercise 2 - **SOLUTION**

Directions:

1. Divide the students into groups of 4-5 and refer them to page 4B.17 in their student workbook. Have them work as teams to answer the exercise question on page 4B.18. Groups will elect a spokesperson to present their answers.
2. Allow 10 minutes for completion.
3. Ask several or all of the groups to present their answers.
4. Review the exercise solution and clarify any points the students may have missed. Remember, this is only a guideline that does not factor in slope or wind.

Your Assignment:

It is October 3 and your 20-person crew has been working on the 3,000 acre Madre Fire for two days. The fire is located in the Coast Range of southern California. Your crew is one of four hand crews assigned to the Division C.

Local Factors:

The fire is burning in chaparral about 10 feet tall. For the last two days you have observed 20 foot flame height on upslope runs during the peak of the burning period. It is 0700; conditions are the same today and you are anticipating the same level of fire behavior.

Fire Situation:

The four crews in Division C are to construct indirect handline up a ridge to tie into a dozer line on top. The fire edge has not yet become established in the drainage adjacent to the proposed line location. You anticipate the fire will continue to make hooking upslope runs with the normal diurnal winds predicted for today.

Proposed Safety Zone:

You are at the anchor point which is an area at the base of the ridge that has been cleared by a dozer. The cleared area is flat and about 200 feet wide by about 300 feet long. Brush surrounds the cleared area on all sides.

Question:

Will it work for a safety zone?

**Solution:**

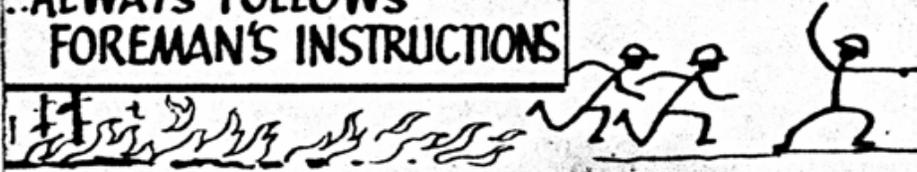
**Using the Safety Zone Guidelines in the Incident Response Pocket Guide, you calculate that:**

- **20 foot flame height x 4 = 80 feet minimum distance separation.**
- **If the fire can burn all the way around the safety zone, this distance separation must be maintained on all sides, meaning a safety zone at least 160 feet in diameter.**

**Conclusion:** The cleared area is a little over an acre in size and 200 feet wide on its narrowest side. So the minimum distance separation requirement is met on all sides for protection from radiant heat. This assumes there is no significant convective heat source to influence your safety zone.

# THE *Really Smart* FOREST FIRE FIGHTER

..ALWAYS FOLLOWS FOREMAN'S INSTRUCTIONS



..NEVER LETS ANYTHING STAMPEDE HIM-



..ALWAYS PICKS ESCAPE ROUTE, WHEN ALONE, Then ..if fire blows up -

..gets inside burn -



..or goes downhill -- or to safest, most easily reached flank -



... never tries to outrun head of fire -



..calculates chances carefully.. takes advantage of whats there!





## **UNIT 4 – FIRELINE OPERATIONS**

### **LESSON 4C – SAFETY AND TACTICS**

#### **INSTRUCTOR NOTES**

This lesson relies heavily on a videotape presentation and seven exercises. There is no quiz for this unit; however, several of the exercises will require the students to perform the objectives of the lesson. Exercise 7 is presented as tactical decision games in which students will utilize topographic maps. See page 4C.59 for more instructions concerning Exercise 7.

It is strongly recommended that this lesson be presented by two or three instructors. One instructor should be responsible for previewing the videotape, ensuring the VCR is working correctly, and stopping the videotape at the correct places as prompted in the lesson outline. The second instructor should facilitate the exercises, monitor class progress, and ensure that the significant points of the exercises are discussed thoroughly. The third instructor (if available), should keep track of time and assist the other two instructors. Instructors may wish to switch roles based on their expertise with the material being presented. This works well, but requires preplanning to be effective.



## DETAILED LESSON OUTLINE

- COURSE:** Crew Boss (Single Resource), S-230
- UNIT:** 4 – Fireline Operations
- LESSON:** 4C – Safety and Tactics
- TIME:** 4 Hours
- TRAINING AIDS:** Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers; DVD or VCR.
- OBJECTIVES:** Upon completion of this lesson, students will be able to:
1. Demonstrate the proper use of LCES in the fire environment in relation to the Crew Boss role.
  2. Organize, plan, and describe the actions that are required when a crew is deployed for fireline suppression activities.
  3. Given an Incident Response Pocket Guide, safely complete a simulated fireline assignment.
  4. Describe safety precautions that should be addressed by the Crew Boss in downhill and indirect fireline construction.
  5. Describe applicable methods to employ in fireline construction that will facilitate rehabilitation.
  6. List the items to check when inspecting a completed fireline.

7. List crew procedures used in staging areas.
8. Describe Crew Boss responsibilities for accidents, injuries, and near misses.
9. Identify supply needs and explain the process for re-supplying a crew while on the fireline.
10. Complete an After Action Review (AAR).

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	4C-01-S230-EP
<b>PRESENT LESSON OBJECTIVES.</b>	4C-02-S230-EP thru 4C-03-S230-EP
<b>ENSURE ALL STUDENTS FULLY UNDERSTAND THE LESSON OBJECTIVES.</b>	
<b>START CREW BOSS VIDEO, SECTION 2.</b>	00-01-S230-VT or DVD, 8 minutes
I. SIZING UP YOUR SITUATION	
A. Operational Activities	
<ul style="list-style-type: none"> <li>• Fireline construction</li> <li>• Firing and holding operations</li> <li>• Mopup and rehabilitation</li> <li>• Initial attack</li> </ul>	
B. Sizeup Considerations	
<ul style="list-style-type: none"> <li>• Fuel characteristics</li> <li>• Topographic characteristics</li> <li>• Weather conditions</li> <li>• Fire behavior conditions</li> <li>• LCES</li> <li>• Operational period</li> <li>• Area of responsibility</li> </ul>	
C. Information Sources	
<ul style="list-style-type: none"> <li>• Line personnel</li> <li>• Air tactical personnel</li> <li>• Local people</li> <li>• Planning unit personnel (field observers, situation unit leader)</li> </ul>	

OUTLINE	AIDS & CUES
<p>D. Sizeup Methods</p> <ul style="list-style-type: none"> <li>• Ask questions</li> <li>• Request helicopter flight <ul style="list-style-type: none"> <li>- Have the pilot make various passes over the work area, i.e., division(s).</li> </ul> </li> <li>• Personally travel the area</li> <li>• Walk the fireline</li> <li>• Assign individuals to sizeup</li> </ul> <p>E. Topography</p> <ul style="list-style-type: none"> <li>• Aspect</li> <li>• Position on the slope</li> <li>• Downhill or uphill line construction</li> <li>• Width of the canyon</li> <li>• Box canyon or chute</li> <li>• Percent of slope</li> <li>• Potential for rolling material</li> <li>• Natural or constructed barriers</li> <li>• Elevation</li> <li>• Saddles</li> </ul> <p>F. Fuels</p> <ul style="list-style-type: none"> <li>• Fuel characteristics</li> <li>• Line construction specifications</li> <li>• Access and mobility</li> <li>• Safety zones</li> <li>• Spotting potential</li> <li>• Hazards to personnel</li> </ul>	

OUTLINE	AIDS & CUES
<p>G. Fire Behavior</p> <ul style="list-style-type: none"> <li>• Rate and direction of spread</li> <li>• Type of fire spread</li> <li>• Classification of the fire</li> <li>• Indicators of extreme fire behavior</li> <li>• Fire size</li> <li>• Location</li> </ul> <p>H. LCES (Lookouts, Communications, Escape Routes, Safety Zones)</p> <ul style="list-style-type: none"> <li>• Post lookouts, maintain communications, establish escape routes and safety zones.</li> <li>• Must be established and known to all firefighters before needed.</li> </ul> <p>I. Weather Conditions</p> <ul style="list-style-type: none"> <li>• Maximum and minimum relative humidity</li> <li>• Wind velocity, direction, and pattern</li> <li>• Temperature variations</li> <li>• Thermal belts</li> <li>• Thunder storm activity</li> <li>• Inversions</li> <li>• Foehn winds</li> <li>• Fire weather forecasts</li> <li>• Red flag warning, alerts</li> <li>• Date of the last precipitation</li> <li>• Indicators of stability</li> </ul>	

OUTLINE	AIDS & CUES
<p>J. Other Elements</p> <ul style="list-style-type: none"> <li>• Biological and environmental hazards</li> <li>• Human made hazards</li> <li>• Availability of critical support</li> <li>• Crew condition</li> <li>• Natural or constructed features</li> <li>• Sensitive resource areas</li> <li>• Accessibility and coordination with adjoining forces</li> </ul> <p><b>STOP THE CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b></p> <p><b>PRESENT EXERCISE 1.</b></p> <ol style="list-style-type: none"> <li><b>1. DIVIDE STUDENTS INTO GROUPS AND REFER THEM TO THE EXERCISE ON PAGE 4C.6 OF THEIR STUDENT WORKBOOK. ASSIGN EACH GROUP ONE OR TWO QUESTIONS.</b></li> <li><b>2. ALLOW 10 MINUTES FOR COMPLETION. DISCUSS EACH GROUP'S ANSWERS.</b></li> <li><b>3. HAND OUT THE EXERCISE SOLUTION AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b></li> </ol>	<p>4C-04-S230-EP</p> <p>SW p. 4C.6</p> <p>4C-01-S230-HO IG p. 4C.35</p>

OUTLINE	AIDS & CUES
<p>II. FIRELINE AND HAND TOOL CONSIDERATIONS</p> <p><b>RESTART CREW BOSS VIDEO.</b></p> <p>A. Line Locator</p> <p>B. Fireline Construction</p> <ul style="list-style-type: none"> <li>• Barriers</li> <li>• Handline</li> <li>• Mechanized line</li> <li>• Wet line</li> <li>• Cold trailing</li> <li>• Fireline explosives</li> </ul> <p>C. Tool Selection</p> <ul style="list-style-type: none"> <li>• Fuel type</li> <li>• Soil</li> <li>• Terrain features</li> </ul> <p>D. Tool Assignment</p> <ul style="list-style-type: none"> <li>• Fuel type</li> <li>• Size and weight</li> <li>• Length of assignment</li> <li>• Endurance factor</li> <li>• Training and experience</li> </ul>	<p>4C-05-S230-EP</p> <p>00-01-S230-VT or DVD, 5 minutes</p>

OUTLINE	AIDS & CUES
<p>E. Crew Performance</p> <ul style="list-style-type: none"> <li>• Spot fires</li> <li>• Flare-ups along the line</li> <li>• Multiple lookouts</li> <li>• Falling operations</li> <li>• Hot spotting</li> <li>• Split crew actions</li> <li>• Staging area procedures</li> </ul> <p>F. Line Specifications</p> <ul style="list-style-type: none"> <li>• Canopy width or “the cut”</li> <li>• Line width or “the scrape”</li> </ul> <p>G. Minimum Impact Suppression Tactics (MIST)</p> <p><b>STOP CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS. DISCUSS THE SAFETY SITUATIONS THAT STUDENTS IDENTIFY.</b></p> <p><b>REFER THE STUDENTS TO “MINIMUM IMPACT SUPPRESSION TACTICS” IN THE IRPG.</b></p> <p>Safety concerns:</p> <ul style="list-style-type: none"> <li>• Lines not cut wide enough to stop the spread of a wildland fire.</li> <li>• Personnel working with poor escape routes or no safety zones.</li> </ul> <p>It is the Crew Boss’s responsibility to ensure that minimum impact suppression tactics are used whenever possible, but not at the expense of safety to the crew.</p>	<p>4C-06-S230-EP</p>

OUTLINE	AIDS & CUES
<p><b>STUDENTS SHOULD BE ENCOURAGED TO DISCUSS THE GOOD AND BAD POINTS OF MINIMUM IMPACT SUPPRESSION TACTICS AND HOW THEY CAN SAFELY IMPLEMENT THIS TACTIC DURING FIRELINE CONSTRUCTION.</b></p> <p>III. FIRELINE TACTICS</p> <p><b>RESTART CREW BOSS VIDEO.</b></p> <p><b>STOP THE CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b></p> <p>A. Direct Attack</p> <ul style="list-style-type: none"> <li>• Parallel - a method of direct attack.</li> </ul> <p><b>REFER STUDENTS TO “STRATEGY - DIRECT ATTACK” IN THE IRPG.</b></p> <p>B. Indirect Attack</p> <p><b>REFER THE STUDENTS TO “STRATEGY - INDIRECT ATTACK” IN THE IRPG.</b></p> <p>Hazards of indirect attack:</p> <ul style="list-style-type: none"> <li>• Unburned fuel between you and the fire.</li> <li>• Numerous shelter deployments and fatalities.</li> <li>• Difficult to observe the main fire.</li> <li>• Complacency</li> <li>• Inadequate safety zones/escape routes.</li> </ul>	<p>00-01-S230-VT or DVD, 3 minutes</p>

OUTLINE	AIDS & CUES
<p>IV. DOWNHILL FIRELINE CONSTRUCTION</p> <p><b>RESTART CREW BOSS VIDEO.</b></p> <p><b>STOP THE CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b></p> <p><b>REFER STUDENTS TO THE DOWNHILL CHECKLIST IN THE FHB AND IRPG.</b></p> <p>The Crew Boss must possess the ability to determine whether a particular area or route will actually work as a safety zone and then apply this knowledge by communicating it to all crew members.</p> <p>A. Downhill Fireline Construction Hazards</p> <p>Downhill fireline construction is hazardous in steep terrain, fast-burning fuels, or rapidly changing weather conditions.</p> <p>Downhill fireline construction should not be attempted unless there is no tactical alternative.</p> <p>B. Downhill Line Construction Guidelines</p> <p>1. Crew supervisor(s) and fireline overhead will discuss assignments prior to committing crew(s). Responsible overhead individual will stay with job until completed.</p> <ul style="list-style-type: none"> <li>• Decision is made by a competent firefighter after thorough scouting (Taskforce Leader [TFLD] or Incident Commander Type 4 [ICT4] qualified or higher).</li> </ul>	<p>00-01-S230-VT or DVD, 8 minutes</p> <p>4C-07-S230-EP</p> <p>4C-08-S230-EP</p> <p>4C-09-S230-EP</p>

OUTLINE	AIDS & CUES
<p>2. Decision will be made after proposed fireline has been scouted by supervisor(s) of involved crew(s).</p> <ul style="list-style-type: none"> <li>• Downhill line construction should not be attempted when fire is directly below the proposed starting point.</li> </ul> <p>3. LCES will be coordinated for all personnel involved.</p> <ul style="list-style-type: none"> <li>• Communication is established with crews working downhill and crews working toward them from below. When either crew can adequately observe the fire, communication will be established between the crews. Supervising overhead and a lookout posted where the fire can be seen.</li> <li>• The crew will be able to rapidly reach a safety zone from any point along the line if the fire unexpectedly crosses below them.</li> <li>• Be aware of and avoid the Watch Out Situations.</li> <li>• Fully comply with the Standard Firefighting Orders.</li> </ul>	<p>4C-10-S230-EP</p>

OUTLINE	AIDS & CUES
<p>4. Direct attack will be used whenever possible; if not possible, the fireline should be completed between anchor points before being fired out.</p> <ul style="list-style-type: none"> <li>• If applicable, line firing should be done as the line progresses, beginning from the anchor point at the top. The burned area provides a continuous safety zone for the crew and reduces the likelihood of fire crossing the line.</li> </ul> <p>5. Fireline will not lie in or adjacent to a chute or chimney.</p> <ul style="list-style-type: none"> <li>• The fireline should not lie adjacent to a chute or chimney that could burn while crew is near.</li> </ul> <p>6. Starting point will be anchored for crew(s) building fireline down from the top.</p> <ul style="list-style-type: none"> <li>• A downhill line should be securely anchored at the top. Avoid underslung line if practical.</li> </ul> <p>7. Bottom of the fire will be monitored; if the potential exists for the fire to spread, action will be taken to secure the fire edge.</p>	<p>4C-11-S230-EP</p>

OUTLINE	AIDS & CUES
<p><b>PRESENT EXERCISE 2.</b></p> <ol style="list-style-type: none"> <li data-bbox="190 373 1146 548">1. <b>REFER STUDENTS TO THE EXERCISE ON PAGE 4C.13 OF THEIR STUDENTWORKBOOK. ASSIGN EACH GROUP ONE OF THE DOWNHILL FATALITY FIRE SCENARIOS.</b></li> <li data-bbox="190 600 1146 774">2. <b>ALLOW 5 MINUTES FOR GROUPS TO COMPLETE THE EXERCISE. EACH GROUP WILL NEED FIVE MINUTES TO PRESENT THEIR ANSWERS.</b></li> </ol> <p><b>REVIEW THE IRPG AND EMPHASIZE TO THE STUDENTS THAT AT THE VERY LEAST, THE FIREFIGHTERS INVOLVED IN THESE ACCIDENTS SHOULD HAVE ADDRESSED THE COMPONENTS OF LCES.</b></p> <p><b>EMPHASIZE TO THE STUDENTS THAT A CRITICAL RESPONSIBILITY OF THE CREW BOSS IS TO IDENTIFY ESCAPE ROUTES AND SAFETY ZONES.</b></p>	<p>4C-12-S230-EP</p> <p>SW p. 4C.13 IG p. 4C.37</p>

OUTLINE	AIDS & CUES
<p>V. AIR SUPPORT</p> <p><b>RESTART CREW BOSS VIDEO.</b></p> <p>A. Air Support</p> <ul style="list-style-type: none"> <li>• Retardant drops</li> <li>• Sling loads</li> <li>• Paracargo</li> <li>• Reconnaissance</li> <li>• Personnel movement</li> </ul> <p>Do not rely on aviation resources as lookouts.</p> <p>B. Aircraft Use</p> <ul style="list-style-type: none"> <li>• Anticipate needs early</li> <li>• Need is appropriate use</li> <li>• Inform supervisor</li> <li>• Confirm radio frequencies</li> </ul> <p>C. Inappropriate Situations</p> <ul style="list-style-type: none"> <li>• Poor visibility</li> <li>• Heavy timber overstory</li> <li>• Hazard trees</li> <li>• Low values at risk</li> <li>• Aircraft require an “out”</li> <li>• High winds reduce drop accuracy</li> <li>• Rotor wash or aircraft vortex problems</li> <li>• Requesting late in the day means loss of daylight</li> </ul>	<p>00-01-S230-VT or DVD, 5 minutes</p>

OUTLINE	AIDS & CUES
<p>D. Communicating with Aircraft</p> <p>1. Clock method</p> <ul style="list-style-type: none"> <li>• Make visual contact</li> <li>• Imagine clock</li> <li>• Add vertical dimension</li> <li>• Add distance</li> <li>• Reference from a known location</li> <li>• Reference to the parts of the fire</li> <li>• Provide Global Positioning System (GPS) coordinates if available</li> </ul> <p>2. Communicate target objective</p> <p><b>STOP CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b></p> <p><b>HAVE STUDENTS REVIEW THE AVIATION WATCH OUT SITUATIONS IN THE IRPG. SOLICIT RESPONSES FROM STUDENTS CONCERNING SITUATIONS WHERE AIRCRAFT USE MAY NOT BE NECESSARY.</b></p>	

OUTLINE	AIDS & CUES
<b>PRESENT EXERCISE 3.</b>	4C-13-S230-EP
<b>1. REFER STUDENTS TO THE EXERCISE ON PAGE 4C.16 OF THEIR STUDENT WORKBOOK. ASSIGN EACH GROUP 2-4 QUESTIONS.</b>	SW p. 4C.16 - 4C.19
<b>2. ALLOW 10 MINUTES FOR COMPLETION. DISCUSS EACH GROUP'S ANSWERS.</b>	
<b>3. HAND OUT THE EXERCISE SOLUTION AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b>	4C-02-S230-HO IG p. 4C.39
<b>VI. FIRING AND HOLDING</b>	
<b>RESTART CREW BOSS VIDEO.</b>	00-01-S230-VT or DVD, 5 minutes
<b>A. Two Types of Firing Operations</b>	
<b>1. Burn out</b>	
<ul style="list-style-type: none"> <li>• Direct attack</li> <li>• Crew Boss responsibility</li> </ul>	
<b>2. Backfiring</b>	
<ul style="list-style-type: none"> <li>• Indirect attack</li> <li>• IC responsibility</li> </ul>	

OUTLINE	AIDS & CUES
<p>B. Firing Operation Preparations</p> <ul style="list-style-type: none"> <li>• Reduce fuels, pretreat</li> <li>• Fall/pretreat snags</li> <li>• Scatter/pretreat fuel</li> <li>• Request support</li> <li>• Install hoselays</li> <li>• Request air drops</li> <li>• Stage resources</li> <li>• Recommend alternatives</li> </ul> <p>C. Crew Boss Responsibilities</p> <ul style="list-style-type: none"> <li>• Lines properly located</li> <li>• Ladder fuels removed</li> <li>• Cup trenches in place</li> <li>• Snags are felled</li> <li>• Line is burned out</li> <li>• Spots located</li> <li>• Lines tied together</li> </ul> <p>D. Holding Operations</p> <ul style="list-style-type: none"> <li>• Check for quality line</li> <li>• Spread out</li> <li>• Moving with the lighters</li> <li>• Spot fire patrol</li> <li>• Monitor problem areas <ul style="list-style-type: none"> <li>- Flare-ups</li> <li>- Snags</li> <li>- Rolling material</li> </ul> </li> <li>• Coordinating with adjacent forces</li> </ul>	
<p><b>STOP CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b></p>	

OUTLINE	AIDS & CUES
<b>PRESENT EXERCISE 4.</b>	4C-14-S230-EP
<b>1. REFER STUDENTS TO THE EXERCISE ON PAGE 4C.22 OF THEIR STUDENT WORKBOOK. ASSIGN EACH GROUP ONE OR TWO QUESTIONS.</b>	SW p. 4C.22 - 4C.25
<b>2. ALLOW 10 MINUTES FOR COMPLETION. DISCUSS EACH GROUP'S ANSWERS.</b>	
<b>3. HAND OUT THE EXERCISE SOLUTION AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b>	4C-03-S230-HO IG p. 4C.45
VII. MOPUP AND REHABILITATION	
<b>RESTART CREW BOSS VIDEO.</b>	00-01-S230-VT or DVD, 3 minutes
A. Mopup	
1. Establish LCES.	
2. Sizeup	
<ul style="list-style-type: none"> <li>• Identify hazards to personnel.</li> <li>• Identify critical threats to fireline.</li> <li>• Plan work according to mopup objectives.</li> </ul>	
3. Brief crew.	

OUTLINE	AIDS & CUES
<p>4. Obtain the proper mopup support equipment.</p> <ul style="list-style-type: none"> <li>• Go through proper chain of command.</li> </ul> <p>5. Deployment of crew.</p> <ul style="list-style-type: none"> <li>• Gridding</li> <li>• Pairing up or “buddy system.”</li> <li>• Work the area in a methodical fashion.</li> </ul> <p>6. Coordination with adjoining forces.</p> <p>7. Night operations.</p> <ul style="list-style-type: none"> <li>• Safety considerations.</li> </ul> <p>B. Rehabilitation</p> <p>Follow rehabilitation standards:</p> <ul style="list-style-type: none"> <li>• Incident Action Plan (IAP).</li> <li>• May work for rehabilitation specialist (Burned Area Emergency Response [BAER] team).</li> </ul> <p><b>STOP CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b></p>	

OUTLINE	AIDS & CUES
<b>PRESENT EXERCISE 5.</b>	4C-15-S230-EP
<b>1. REFER STUDENTS TO THE EXERCISE ON PAGE 4C.28 OF THEIR STUDENT WORKBOOK. ASSIGN EACH GROUP A QUESTION.</b>	SW p. 4C.28
<b>2. ALLOW 5 MINUTES FOR COMPLETION. DISCUSS EACH GROUP'S ANSWERS.</b>	
<b>3. HAND OUT THE EXERCISE SOLUTIONS AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b>	4C-04-S230-HO IG p. 4C.53
<b>VIII. INITIAL ATTACK</b>	
<b>RESTART THE CREW BOSS VIDEO.</b>	00-01-S230-VT or DVD, 3 minutes
<p>Crew Boss may be asked to divide the crew into smaller initial attack modules. Ensure that each module has a qualified Initial Attack Incident Commander.</p>	
<p>Orientation briefing:</p>	
<ul style="list-style-type: none"> <li>• Escape routes</li> <li>• Safety zones</li> <li>• Fuel types</li> <li>• Local fire behavior</li> <li>• Communication procedures</li> <li>• Aircraft availability</li> <li>• Local hazards</li> <li>• Medical evacuation</li> <li>• Special logistical support needs</li> </ul>	
<b>STOP CREW BOSS VIDEO. ASK STUDENTS IF THEY HAVE ANY QUESTIONS.</b>	

OUTLINE	AIDS & CUES
<b>PRESENT EXERCISE 6.</b>	4C-16-S230-EP
<b>1. REFER STUDENTS TO THE EXERCISE ON PAGE 4C.30 OF THEIR STUDENT WORKBOOK. ASSIGN EACH GROUP ONE OF THE FOUR QUESTIONS.</b>	SW p. 4C.30 - 4C.31
<b>2. ALLOW 5 MINUTES FOR COMPLETION. DISCUSS EACH GROUP'S ANSWERS.</b>	
<b>3. HAND OUT THE EXERCISE SOLUTION AND ELABORATE ON ANY PERTINENT POINTS THAT STUDENTS MAY HAVE MISSED.</b>	4C-05-S230-HO IG p. 4C.55
<b>IX. WILDLAND/URBAN INTERFACE</b>	4C-17-S230-EP
<p>With the increased firefighting activities in the urban interface, wildland firefighters must become aware of a new fire environment.</p>	
<b>REFER STUDENTS TO THE FIRELINE HANDBOOK. IN THE FIREFIGHTER SAFETY SECTION OF THE FIRELINE HANDBOOK, THE FOLLOWING STATEMENT CAN BE FOUND UNDER "SAFETY WHILE PROTECTING STRUCTURES FROM WILDLAND FIRES."</b>	
<p><i>Structures exposed to wildland fire in the urban interface can and should be considered as another fuel type. Sizeup and tactics should be based upon fuels, weather and topography, just as those criteria would be applied to a wildland fire.</i></p>	4C-18-S230-EP

OUTLINE	AIDS & CUES
<p><b>REFER STUDENTS TO THE “WILDLAND-URBAN WATCH OUTS AND POWERLINE SAFETY” SECTION OF THE IRPG.</b></p>	
<p>A. Poor Access and Narrow One-way Roads</p> <ul style="list-style-type: none"> <li>• Which direction should you have your vehicles pointed when parked? What sort of safety concerns would you have as a Crew Boss?</li> </ul>	4C-19-S230-EP
<p>B. Bridge Load Limits</p> <ul style="list-style-type: none"> <li>• What vehicles are using the bridge (dozers, engines, water tenders, crew transports)?</li> </ul>	4C-20-S230-EP
<p>C. Wooden Construction and Wood Shake Roofs</p> <ul style="list-style-type: none"> <li>• How would a crew help to mitigate this challenge?</li> </ul>	4C-21-S230-EP
<p>D. Powerlines, Propane Tanks, and HazMat Threats</p> <ul style="list-style-type: none"> <li>• What should the Crew Boss consider when encountering these situations when responding to an incident? Who should be contacted to mitigate the hazards?</li> </ul>	4C-22-S230-EP
<p>E. Inadequate Water Supply</p> <ul style="list-style-type: none"> <li>• What water source opportunities are in the Wildland/Urban environment? <ul style="list-style-type: none"> <li>- Cattle tanks, swimming pools, fire hydrants, irrigation ditches.</li> </ul> </li> </ul>	4C-23-S230-EP

OUTLINE	AIDS & CUES
<p>F. Natural Fuels 30 Feet or Closer to Structures</p> <ul style="list-style-type: none"> <li>• How can a crew reduce the fuel loading problems near structures? Do you cut down “ornamental landscaping?”</li> </ul>	4C-24-S230-EP
<p>G. Structures in Chimneys, Box Canyons, Narrow Canyons, or on Steep Slopes (30% or Greater).</p> <ul style="list-style-type: none"> <li>• What would be a major safety issue for you and your crew? How would you mitigate that safety issue?</li> </ul>	4C-25-S230-EP
<p>H. Extreme Fire Behavior</p> <ul style="list-style-type: none"> <li>• It is appropriate and highly encouraged to pull back to a safe place and watch the fire when you are uncomfortable with the current fire behavior conditions.</li> </ul>	4C-26-S230-EP
<p>I. Strong Winds</p> <ul style="list-style-type: none"> <li>• What are some of the problems you would expect to encounter in the Wildland/Urban environment under strong, erratic wind conditions?</li> </ul>	4C-27-S230-EP
<p>J. Evacuation of Public (panic)</p> <ul style="list-style-type: none"> <li>• What are some of the problems you would expect to encounter during a public evacuation? <ul style="list-style-type: none"> <li>- Local residents who stay behind to protect their property (lack of PPE, communication, and fire training).</li> </ul> </li> </ul>	4C-28-S230-EP





OUTLINE	AIDS & CUES
<p>A. Situations</p> <ol style="list-style-type: none"> <li>1. Three people on your crew are in a tent using illegal drugs.</li> <li>2. The Division Group Supervisor (DIVS) is belittling you and your crew because you told him/her that you would not take your crew into a deep canyon and build line.</li> <li>3. You are getting ready to hike into your assignment when a division supervisor (not the one you were assigned to) explains you have been reassigned and you need to go with him.</li> <li>4. A firefighter on your crew went to the doctor and came back to camp drunk.</li> <li>5. A firefighter on your crew leaves his/her gloves and canteens in camp.</li> <li>6. The strike team leader (STCR) wants to split your crew. Your squad bosses are capable but the crew is very inexperienced.</li> <li>7. Half of your crew has to return to college in two days.</li> <li>8. You arrive to an assignment in Montana where the daytime temperature is 50 degrees and the nighttime temperature is in the 30s. Your crew is from southern California and they are totally unprepared for the cold.</li> </ol>	

OUTLINE	AIDS & CUES
9. An attractive male or female walks by your crew and someone on your crew whistles.	
10. A swamper on your crew is cut by a sawyer on the leg and the next day another swamper is cut by the same sawyer.	
11. The bus driver who drove your crew to the fire is unsafe in your estimation.	
12. You think the helicopter you are riding in hits the tail rotor on the ground as the helicopter is landing.	
13. Your crew has been working for 14 hours on initial attack. The time is now 2300 hours and you are informed that most of your crew is out of water.	
12. You are out of your agency's jurisdiction and two people on your crew do not have their red cards with them.	
14. It is a dark night and your crew is digging line when a snag falls and hits one of your crew members on the head knocking him/her unconscious.	
15. Your crew and another crew have been working together for eight days. Your crew is doing all the work.	

OUTLINE	AIDS & CUES
<p>16. Your crew arrives on a fire out of state. You were flown to the assignment so you have no saw gas, water or fusees. You are driven straight to the fireline without any of your supplies and told to start work.</p>	
<p>17. Two people on your crew are sleeping together at the end of each operational period. One of the other firefighters on the crew is upset.</p>	
<p>18. You are 30 minutes out in front of your crew scouting line, when your squad leader calls to inform you that one of your sawyers just fell off a 12 foot ledge and is not moving.</p>	
<p>19. One of the people on your crew has a family emergency and must go home.</p>	
<p>20. Two of your crew members inform you they have lice. What are your responsibilities to the crew, the two crew members, and other people in the camp?</p>	
<p>21. Just before heading out of fire camp for day shift, your crew informs you that the supply unit is out of lunches.</p>	
<p>22. A pilot drops you and seven of your crew members off at the wrong helispot.</p>	
<p>23. You lose communication with your squad leader who is your line scout. You have not heard from him in two hours.</p>	

OUTLINE	AIDS & CUES
24. You are the only qualified Crew Boss on the crew and you must leave the fire assignment because of a family emergency at home.	
25. You are en route to a fire and your engine breaks down.	
26. You are en route to an assignment and while on your way you spot a new fire.	
27. You are at the airport about to board your plane when you notice one of your crew members is missing.	
28. Your crew is off duty in town and three of your crew members are arrested. Your entire crew is to report to camp for an assignment in the morning.	
29. You are in an accident with another fire vehicle while on your way back to camp. You can not reach anyone on the radio.	
30. You receive an emergency message over the radio that one of your firefighters needs to contact the communications unit as soon as possible.	
31. You have been working on a fire for eight days and a shower unit still has not been set up in fire camp.	

OUTLINE	AIDS & CUES
<p>32. You have a vehicle assigned to your crew to carry your tools and fuel. It is after hours, and some of your crew members want to take the truck into town to watch a movie.</p> <p>33. You are getting ready to go on shift when one of your crew members informs you she is pregnant.</p> <p>34. One of your crew members wants to show you the arrowheads he found during his mopup shift.</p> <p>35. You just arrived on a fire assignment and you attend the briefing. However, you find out you are not on the IAP.</p> <p>36. While mopping up on a Type 1 incident, the operations section chief (OSC1) contacts you on the radio and requests you move your engine crew to another division.</p> <p>37. On your way to a fire, you witness a vehicle accident.</p>	
<p>B. Do you have any “What would you do” questions for the instructors?</p>	<p>4C-32-S230-EP</p>

OUTLINE	AIDS & CUES
<b>PRESENT EXERCISE 7.</b>	4C-33-S230-EP
<ol style="list-style-type: none"> <li data-bbox="190 373 1146 590">1. <b>DIVIDE STUDENTS INTO EQUAL GROUPS AND REFER THEM TO THE EXERCISE ON PAGE 4C.36 OF THEIR STUDENT WORKBOOK. A BRIEF OVERVIEW OF EACH SCENARIO AND SPACE FOR TAKING NOTES IS PROVIDED.</b></li> <li data-bbox="190 642 1146 898">2. <b>DEPENDING ON THE NUMBER OF STUDENT GROUPS, ONE OR ALL EIGHT OF THE SCENARIOS CAN BE USED. HAVE AREAS SEPARATED FOR EACH SCENARIO SO THAT THE STUDENT GROUPS CANNOT HEAR ADJACENT SCENARIOS.</b></li> <li data-bbox="190 951 1146 1167">3. <b>ASSIGN CADRE MEMBERS OR SUBJECT MATTER EXPERTS TO FACILITATE THIS TACTICAL DECISION GAME EXERCISE. A FACILITATOR IS NEEDED AT EACH STATION TO IMPLEMENT THE SCENARIO.</b></li> </ol>	<p data-bbox="1154 373 1341 411">IG p. 4C.59</p> <p data-bbox="1154 417 1482 455">SW p. 4C.36 - 4C.44</p>
<b>THIS EXERCISE IS 4-6 HOURS.</b>	
<b>REVIEW LESSON OBJECTIVES.</b>	4C-34-S230-EP
<b>CLARIFY ANY QUESTIONS STUDENTS MAY HAVE REGARDING THIS LESSON.</b>	4C-35-S230-EP
<b>HAVE STUDENTS COMPLETE AND TURN IN A UNIT EVALUATION FORM FOR LESSONS A, B, AND C.</b>	



COURSE: Crew Boss (Single Resource), S-230

LESSON 4C: Exercise 1 - **SOLUTION**

A crew is assigned to Division A on a wildland fire incident. The crew is to fly to H-1 and then to construct direct line from H-1 to the A-B Division boundary.

1. Before the flight to H-1, what can the Crew Boss do to prepare for this assignment?
  - **Have a copy of the crew manifest for the helitack crew.**
  - **Fiber tape tools in small bundles or box them up for transport.**
  - **Ensure that all crew members have chinstraps, earplugs, and gloves.**
  - **Ensure the first load includes the Crew Boss, one squad boss, a saw team, and tools/equipment.**
  - **Ensure the other load(s) include a squad boss.**
  - **Request helitack to fly over the assigned work area.**
  - **Request flight helmet from helitack.**
  - **Ensure the Crew Boss's location on the aircraft allows visibility to see the fire area.**
  - **Have incident map available.**
  
2. During the flight to H-1, what can the Crew Boss do to improve situation awareness in this assignment?
  - **Get oriented by using the map**
  - **Fuel characteristics**
  - **Topographic characteristics**
  - **Present and predicted weather conditions**
  - **Present and predicted fire behavior conditions**
  - **LCES**
  - **Operational period - working during the day or working during the night.**
  - **Overall size of area of responsibility**

3. After the crew has arrived at H-1, what actions should the Crew Boss take prior to making crew assignments?
  - **Assign a squad boss to brief the crew when they arrive.**
  - **Ensure squad bosses are briefed about LCES.**
  - **Brief squad bosses on the anchor location.**
  - **Initiate sizeup and flagging operations.**
  - **Discuss specific tactics - direct, indirect, cold trail, use barriers.**
  
4. In addition to fuels, weather and topography, what critical elements may influence line construction production?
  - **Biological/environmental hazards**
  - **Human caused hazards**
  - **Availability of critical support**
  - **Crew condition**
  - **Natural or constructed features**
  - **Sensitive resource areas**
  - **Accessibility**
  - **Coordination with adjoining forces**
  
5. The crew has been constructing direct line for one hour. The Crew Boss realizes that at this production rate, the crew will not tie in to Division B at the established time. What actions should the Crew Boss take?
  - **Notify DIVS of the situation and provide recommendations.**

COURSE: Crew Boss (Single Resource), S-230

LESSON 4C: Exercise 2

The instructor will assign one of the following three fires to each group.

In your group, review the assigned downhill line construction example shown in the video. Within your group, discuss how the checklist could have been implemented to provide for a safe assignment. Be prepared to present your findings to the class. Utilize the downhill checklist in the Incident Response Pocket Guide.

Note: Downhill Checklist was developed as a result of the Loop Fire.

Mann Gulch, 1949

Loop, 1966

South Canyon, 1994



COURSE: Crew Boss (Single Resource), S-230

LESSON 4C: Exercise 3 - **SOLUTION**

You are assigned to the Rocky Fire. The fire consists of four divisions. Your crew is assigned to Division B along with two other Type 2 hand crews. Division B and C have approximately 120 chains of open line between them in a remote roadless area. Divisions A and D are lined and mopup operations are in progress.

Fuels:

Fuel model 4.

Fire Behavior:

Division A and D are in a smoldering stage with some ground fire occurring. Occasional torching of aerial fuels can be expected throughout the operational period.

Divisions B and C are in a creeping fire stage experiencing intermittent open flame up to two feet along the perimeter of the fire. Occasional torching is occurring in the far north end of the fire between the two divisions.

Weather Current:

Mid-flame winds south at 0-3 miles per hour.  
Relative humidity is 51%, and the temperature is 58 degrees.

Weather Predicted:

Mid-flame winds south to southwest 0-3 miles per hour.  
Relative humidity 22% with a temperature of 80 degrees.

Assignment :

Build direct line and burn out where needed in conjunction with the other two hand crews in the division. There are four Type 2 hand crews working your direction in Division C. All three hand crews assigned to Division B are to be flown into H-3 at the Division A/B boundary.

The incident action plan (IAP) indicates the Rocky air tactical group supervisor will be airborne over the incident at 0700. There are three Type 2 helicopters and four Type 2 air tankers assigned to the incident.

The time is now 0600. The incident briefing has just concluded and your division supervisor (DIVS) has directed all of the Crew Bosses to meet outside the briefing tent for further directions.

Answer the following questions in groups and elect a spokesperson to provide your solutions to the class.

1. What helicopter/fixed wing issues should you and the DIVS discuss at this time?
  - **Transportation to helibase if appropriate.**
  - **What crew should fly first?**
  - **What procedure should be used to request helicopter bucket work or fixed wing retardant air support?**
  - **Is the Type 2 helicopter available for air support as soon as the crew is in place at H-3?**
  
2. What other incident personnel can you place orders with?
  - **Air tactical group supervisor (ATGS).**
  - **Relay through an adjacent DIVS.**
  - **Relay through an airborne helicopter pilot.**

3. Describe the information you would provide when ordering air support.
  - **Type of air support needed.**
  - **Amount of air support needed.**
  - **Recommended length of lead time if appropriate.**
  - **Size and condition of spot fire (if there is a spot fire).**
  - **Hazards in the area.**
  - **Possible water sources in your area.**
  - **Ground contact and general location in relation to the target.**
  
4. What information should you request from the individuals you listed in question two when placing your order?
  - **Frequency aircraft will use**
  - **ETA**
  - **Aircraft identifier**
  - **Turn around time**

It is now 1000 and there is a spot fire causing problems. The DIVS has directed you to use the Type 2 helicopter to suppress the spot fire. The helicopter will be at your spot fire in five to eight minutes. There is a five-person squad from your crew with radio communications working the spot at this time. Your position is ten chains above the spot where you can clearly see your crew and the squad.

5. Describe any safety concerns you have regarding your crew in relation to the incoming air support and the appropriate actions you should take.
  - **Squad personnel being exposed to bucket drop. Have squad boss move all personnel on the spot to a safe location parallel to the spot fire.**
  - **Hazards may include:**
    - **Rolling rocks and debris.**
    - **Broken tree tops falling to the ground, broken limbs left in the canopy.**
    - **Burning material being swept away with water from bucket drop into unburned fuel outside the spot.**
    - **Dust and other airborne debris created from the rotor wash.**

- **Pilot releasing the load early or late over crew personnel.**
- **Excessive noise from the helicopter.**
- **Flare up of spot fire from rotor wash.**

6. Describe the procedures and any equipment you will use to guide the responding aircraft to the target.

- **Monitor air to ground radio frequency.**
- **Be prepared to direct the helicopter initially to your location using only the noise from the helicopter.**
- **Use the clock method in conjunction with a signal mirror, strobe light, topographic features, and/or the fire's behavior (smoke column, flare-ups).**
- **Identify the target location using a combination of flagging, standing in the drop location, wave arms/hard hat.**

7. Describe the information that should be communicated to the pilot after the drop is completed.

- **Effectiveness (long, short, wide penetration) through the canopy.**
- **Do you need the pilot to reload and return?**

Your crew has been working for three hours. They will be unable to complete the operational period without being re-supplied with drinking water and saw gas.

8. What actions should you take?

- **Inform the other two crews in your division of your situation.**
- **Advise them that you will be placing an order through the DIVS for sling loads of drinking water, saw gas and bar oil.**
- **Ask if they want to be included in the order.**
- **Determine where the sling load should be delivered. Normally this is determined by the lead Crew Boss in a leapfrog operation and is a site that the other crews can re-equip at as they bump ahead.**
- **Determine who will be the ground contact.**
- **Order logistical support through DIVS or communications unit if appropriate.**

It is now 1100. Your DIVS advises you and the other two Crew Bosses that your crew is to use the necessary personnel and equipment to construct a new helispot in the area of where the crews expect to have completed line by 1800. The helispot must be built to land a Type 2 helicopter and be completed by 1700.

9. What are your safety concerns during the construction of the helispot?
  - **Adequate reconnaissance of the proposed helispot must be accomplished prior to the deployment of your crew.**
  - **Consider using ATGS or an available helicopter to assist in the selection of the proposed helispot.**
  - **Ensure the site is secure from the main fire's advance.**
  - **Ensure LCES walking into the proposed site and throughout construction phase.**
  - **Follow Standard Firefighting Orders and Watch Out Situations.**
  - **Ensure the fire's edge or any burn out operations do not advance close enough to create adverse smoke or flare-up conditions during crew movement.**
  
10. List the minimum distances to accommodate overall length, rotor blade diameter and safety allowance for a two way helispot. Include touch down pad, safety circle dimensions and firmness requirements.
  - **See IRPG**
  
11. What procedures do you take when the helispot is complete and ready for operation?
  - **Advise the DIVS or ATGS that the helispot is complete and recommend the spot be inspected and approved for use.**
  - **Be prepared to make any final improvements as per the ATGSs or helicopter coordinator's inspection.**
  - **Tie flagging onto a nearby tree or branch to be used as a wind indicator.**



COURSE: Crew Boss (Single Resource), S-230

LESSON 4C: Exercise 4 - **SOLUTION**

You are a Type 2 Crew Boss. You have just completed check-in at the Diamond Fire Incident Base and have been briefed by the DIVS. Your assignment is to use your bus and pickup truck, drive to Drop Point 1, tool up and assist two Type 1 hotshot crews constructing fireline in Division A on the west flank of the fire. The hotshot crews have been working the fire for three hours constructing direct line and burning out where necessary. The fire has been burning for four hours.

Fuels:

Fuel model 2.

Fire behavior:

The fire is burning in a northeast direction at a moderate rate of spread with spotting occurring up to 1/4 mile in front of the head of the fire. The flanks of the fire are experiencing a backing and flanking fire condition with some short range spotting occurring up to fifty feet outside the main fire edge. Topography is gentle slopes up to a maximum of thirty percent.

Current Weather:

Mid-flame winds are south southwest up canyon two to six miles per hour. Relative humidity is 18% and the temperature is 83 degrees.

Weather Predicted (by 2000):

Mid-flame winds down canyon three miles per hour and ridge top winds will be east two to six miles per hour. Relative humidity is expected to be 25% and the temperature should be about 68 degrees.

1. What should you consider regarding equipment and supplies prior to leaving the base?

- **Contact the DIVS and ascertain if the Type 1 crews need any additional burning equipment or supplies from the incident base in support of the assignment (equipment, food, or water).**
- **Anticipate involvement in firing and holding operations and obtain the necessary equipment needed prior to leaving the incident base (extra fusees, drip torches/fuel, and backpack pumps).**
- **Anticipate working an extended shift and obtain extra sack lunches and/or rations.**

2. What information should you discuss with the Type 1 Crew Bosses upon arriving at Drop Point 1?

- **How should your crew be deployed in conjunction with their crews?**
- **What recommendations do they have?**
- **What information can they add concerning the current conditions relating to fire behavior, terrain, fuels, and general hazards in the immediate area?**
- **Are there lookouts in place; names and locations?**
- **Have escape routes and safety zones been established?**
- **What radio frequencies are the Type 1 crews working on?**
- **Communicate your crew's limitations and capabilities with the Type 1 Crew Bosses.**

You have discussed the general situation with the other two Crew Bosses. It is agreed by all of you that your crew will be most effective holding the completed line from DP-1 as far out from the line as you can safely deploy. The Type 1 crews estimate they have progressed with completed line construction approximately one mile from DP-1.

3. What procedures should you consider prior to deploying your crew?

- **Size up the line personally or rely on the information provided by the Type 1 Crew Bosses to base your decisions upon.**
- **Determine how the crew will be deployed and discuss with squad bosses. (This general determination will be based on the crew's experience levels and capabilities in relation to current fire behavior, fuels, weather, and topographic conditions. The number of radios and saw teams will also play a significant role in this decision.)**
- **Perform a crew briefing on the general fire situation and objectives, designate the intra-crew and other pertinent communication frequencies. Discuss personnel assignments and safety issues.**
- **Size up the situation and identify LCES for all crew personnel.**
- **Discuss spot fire and slopover procedures.**
- **Assign appropriate personnel to spot fire patrol duties.**

It is now 1800 hours. Your DIVS radios the Type 1 crew conducting the burn out operation and reassigns them to the other division. Your crew and the remaining Type 1 Crew Boss agree that your crew will now have to take on the burn out and holding operation while the remaining Type 1 crew continues to construct handline. Currently, the wind direction and slope conditions are favorable with the wind blowing across the line and uphill into the backing main fire. The Type 1 crew is building line approximately a chain away from the main fire's edge, and when appropriate, is constructing parallel line across unburned fingers of fuel.

4. What are your concerns regarding your firing operation in relation to the Type 1 crew ahead of your crew?

- **Establishing and maintaining constant communications with the Type 1 crew concerning your progress and their situation.**
- **Developing, maintaining and controlling an adequate level of firing intensities and keeping the exposure to the Type 1 crew to a minimum.**
- **Providing a clean black edge as a safety zone for the Type 1 crew and your crew to retreat to if necessary.**
- **Coordinating your firing/holding operation with the line building operation in order to maintain the appropriate distance between the two crews. A primary safety consideration for you and the other Crew Boss is that what is fired can be held and the lead line building crew does not continue to build line away from the firing operation unless it is safe to do so.**

5. How would you set up your firing team organization?

- **Use one of your most experienced squad bosses to directly supervise the operation.**
- **Use a minimum number of lighting personnel. The smaller the organization, the easier to control.**

- **Make sure the firing team uses the proper radio and intra-crew communications necessary to safely conduct the operation.**
  - **Provide lookouts, escape routes, and safety zone procedures and make them known to all personnel.**
  - **Describe the roles of each member of the firing team including the firing techniques and procedures that will be followed during the operation.**
  - **Discuss your role and location during the operation with all squad bosses on your crew.**
6. Describe the firing team configuration you would use and the equipment you would need to perform under the current conditions.
- **Use 1 to 3 lighters.**
  - **Use a 3, 2, 1, configuration with lighter #3 being uphill and out in front of lighters #2 and the edge lighter #1 position. When appropriate, adjust the number of lighters to safely meet the conditions and tactical considerations.**
  - **The squad boss in charge should be mobile and in full view of all lighters to maintain safety and appropriate fire intensities.**
  - **The Crew Boss's location should be in a position where the individual can monitor and coordinate both the firing and holding operations.**
  - **Fusees, drip torches and natural fire should be adequate equipment under these conditions. Anticipate need for additional supply of firing equipment.**

7. What procedures and adjustments would you take regarding your holding operation?
- **Request through your DIVS that additional resources be assigned to the division to support the holding and line construction operations (hand crews, hose lays, helicopters for bucket operations).**
  - **Assign one squad boss with a radio to patrol back behind the crew for spots or slopovers and to supervise the remaining holding personnel.**
  - **Make sure holding crew uses the proper radio and intra-crew communications and does not disrupt or endanger the firing team operation.**
  - **Designate lookouts, provide and discuss escape routes and safety zone procedures, and make them known to all personnel.**
  - **Describe the roles of each member of the holding crew including the holding procedures that will be followed during the event of spot fires or slopovers.**
  - **Discuss your role and location during the operation to all squad bosses on your crew.**

Firing has been progressing successfully for 30 minutes when one of your squad boss radios to you that she is observing drift smoke coming from the trees 100 yards outside of the fireline.

8. What action should you consider at this time?

- **Ensure LCES is not compromised.**
- **Determine whether or not you have the confidence in the squad boss's ability to safely and effectively size up this situation.**
- **Send the squad boss with an additional crew member to the area in question to obtain an accurate sizeup.**
- **Adjust crew organization to ensure crew safety and supervision.**
- **Adjust the speed of the firing operation until adequate sizeup information is provided by the squad boss.**

The squad boss reports a small spot fire (10 ft. x 10 ft.), burning in light fuel around the base of a snag. The fire is just getting established in the base of the snag. The squad boss advises she can handle the spot with the resources on scene.

9. What actions should you consider at this time?

- **Determine how long the squad boss will be committed.**
- **Maintain LCES with the squad boss.**
- **Notify DIVS of your situation.**
- **Remember to monitor the spot fire throughout the operational period as necessary.**
- **Notify relief crew and/or adjoining forces of the spot fire location.**
- **Continue patrolling for additional spots.**

10. Describe the appropriate suppression action that the squad boss should implement.

**NOTE: The instructor must discuss why this list of information is essential.**

- **Extinguish the fire in the base of the snag promptly. Use dirt and/or water if available to cool the fuel. Construct a direct fireline around the fire area by scraping and/or separating burning material with a shovel and/or a pulaski.**
- **Observe snag for falling bark and/or limbs.**
- **After accomplishing full containment of the spot fire the squad boss should radio the Crew Boss and provide a progress report.**
- **Squad boss should flag the location of the spot fire back to the main fireline. A note describing following essential information should be tied to the last flag at the main fireline location.**
- **Spot Fire Note Information:**
  - **Date and time found**
  - **Size of spot (i.e., 10 ft. x 10 ft.)**
  - **Distance to spot (100 yards north)**
  - **Direction to spot (follow pink flagging)**
  - **Lined or unlined**
  - **Name of the resource**

COURSE: Crew Boss (Single Resource), S-230

LESSON 4C: Exercise 5 - **SOLUTION**

A crew has been working on a Type 2 incident for two weeks in the southeastern United States. Fuels are mostly in fuel model 6, the weather has been 70-80 degrees every day, and the relative humidity has averaged 30 - 50 percent. Thunderstorm winds have caused control problems and hazards most afternoons. Today the fire is smoldering and the lines have been completed around the entire perimeter.

1. What are some safety considerations that must be identified during the mopup phase of this fire suppression effort by the Crew Boss?
  - **Continue to provide for LCES**
  - **Unburned islands/areas of fuel**
  - **Snags and limbs hanging in tree tops**
  - **Rolling debris**
  - **Burned out stump holes**
  - **Crew member awareness and morale**
  - **Inform personnel of projected weather/fire behavior conditions**
  - **How to handle spot fires and flare ups**
  - **Special concerns with night operations**
  - **Overconfidence, complacency, and cumulative fatigue**

2. In addition to safety responsibilities, Crew Bosses must ensure that crew members function as effectively as possible. How can a Crew Boss ensure mopup is accomplished efficiently?

- **Obtain the proper mopup support equipment (pumps, hose, air support).**
- **Work the area in an organized, methodical fashion.**
- **Identify and initiate saw work early to prevent problems with large fuels later.**
- **Work the crew in pairs.**
- **Ensure that hand tools are used in conjunction with nozzles and that water is stirred and mixed with the soil and ash.**
- **Use infrared heat detectors when available.**
- **Provide crew members with adequate rest periods.**
- **Coordinate actions with adjoining forces.**
- **Ensure novice firefighters receive on the job training.**

3. It is often extremely challenging for Crew Bosses to keep crew members motivated during mopup operations. How could a Crew Boss in this situation mitigate this challenge and guard against morale letdowns?

- **Lead by example.**
- **Provide crew members with adequate rest periods.**
- **Provide crew members with timely, thorough briefings.**
- **Take advantage of training opportunities.**
- **Share the hazards and hardships with your subordinates.**

COURSE: Crew Boss (Single Resource), S-230

LESSON 4C: Exercise 6 - **SOLUTION**

A crew is working in the Southwest and has been assigned to assist with local initial attack activities. Lookouts in the area have reported 30 new starts from last night's lightning storm. Today's forecast calls for increased temperatures and local gusty winds.

1. As the Crew Boss, what can you do to prepare the crew for this assignment?
  - **Obtain a situation briefing from local personnel for all crew members.**
  - **Establish a communication procedure with the local unit and obtain radios, area frequencies, organization charts and local area maps.**
  - **Arrange for logistical support to include:**
    - a. **food/water**
    - b. **tools/saws, mixed fuel, and bar oil**
    - c. **maps/compass, belt weather kits**
    - d. **radio communications with extra batteries**
    - e. **back pack pumps/firing equipment**
    - f. **transportation**
  - **Organize the crew into module sizes that meet the local unit needs (2, 3, 4, or 10 person modules).**
  - **Ensure a qualified Initial Attack Incident Commander is assigned to each module.**
  - **Ensure crew members are prepared for field assignments of up to 48 hours without re-supply.**

After the crew is prepared, the Fire Management Officer (FMO) requests the Crew Boss to break the crew into six 3-person and one 2-person modules because the reported fires have been smaller than 1/4 acre in size.

2. How should the Crew Boss organize the crew to meet the FMO's request?
  - **Ensure that the Crew Boss/squad boss be placed in the last module assigned and that each module have a qualified Initial Attack Incident Commander with a qualified sawyer (when appropriate).**
  - **Mix the individual experience levels in each module.**
  - **Ensure each module has communications.**
  
3. What options does the Crew Boss have if there are only five crew members who are Initial Attack Incident Commander qualified?
  - **Inform the FMO that the crew cannot be broken into modules smaller than four people.**
  - **Find out if the FMO can locate two qualified Initial Attack Incident Commanders to use in conjunction with the remaining crew members.**

It is now 2000 and lightning is starting many small fires in the area. Two more Initial Attack Incident Commanders have joined the crew and everyone is getting ready to initial attack the new fires.

4. What items would you brief your crew about in this situation?
  - **Possible restructure of modules**
  - **Rotation list procedures**
  - **LCES**

- **Anticipated fire behavior at night**
- **Precautions to take to avoid being struck by lightning**
- **Lack of air support for night activities**
- **Possibility of using coyote tactics**
- **Extra food and water requirements**
- **Environmental and biological hazards**
- **Transportation arrangements**
- **Reinforcement and re-supply procedures**
- **Sizeup report utilizing IRPG**
- **Ensure the work/rest guidelines are followed**



COURSE: Crew Boss (Single Resource), S-230

LESSON 4C: Exercise 7

### **Objectives**

- Exercise decision-making skills in a tactical context.
- Provide experience in developing pattern recognition skills.
- Practice communicating decisions.

### **Prior to Exercise**

- Provide areas for student groups with sufficient space so that individual groups will not be able to hear the adjacent scenarios. The exercises can be conducted outside on a table, hood of a vehicle, in a classroom, etc. The number of areas needed will depend on the number of student groups to rotate through the scenarios.
- Included in the course package are eight scenarios. Any or all of these scenarios can be used. Example: For four student groups, use four scenarios and rotate the students through each scenario, allowing 15 minutes at each station.
- Each station will have a topographic map with fire perimeter that corresponds with the scenario assigned.
- Review given scenarios and prepare a briefing. Facilitators will play the roles of division supervisor, Incident Commander, or a district duty officer.
- Ensure students have note taking materials (located in the student workbook) and an IRPG.
- Introduce students to exercise objectives and format.

- Define “Rules” of the exercise.
  - Time limit for each station (15 minutes at each station, then rotate groups).
  - Decisions issued as clear instructions (briefings, radio communication, etc.)
  - No “school” solution.

If this exercise is to be conducted as a sand table exercise, refer to Tactical Decision Games Workbook located online at [www.fireleadership.gov/toolbox/toolbox.html](http://www.fireleadership.gov/toolbox/toolbox.html). Under the title “Make Sound Decisions” are links to instructions on implementing the tactical decision games using sand tables.

### **During Exercise**

- Introduce the scenario. Avoid reading, issue as a briefing. Maintain eye contact with students.
- Anticipate and answer reasonable additional questions, but do not prolong scenario briefing.
- Signal start of time limit.
- Are you still answering questions or “coaching”? Stop it!
- Signal time is up.
- Select a student to provide a solution, do not rely on volunteers.
- Direct selected student to issue decision as instructions to other students assigned to “subordinate roles.”
- Is the decision being delivered as instructions? No theoretical “would have” “should have” or “could have” discussions allowed!
- After instructions have been issued, check role-playing subordinates’ feedback to ensure instructions were understood.
- Select students for additional solutions, repeating process.

## **After Action Review**

- Question the students thought process:
  - Why did you do this or that?
  - What was your situational assessment?
  - What would you have done if...?
  - What were your assumptions about the situation?
  - What is your biggest concern about your plan?
- Are you dominating the discussion? Stop it!
- Are you managing the entire group? Make sure all students are engaged!
- Draw out lessons. Summarize and accentuate them. Facilitate and moderate constructive criticism and encourage debate.
- Resist offering “Your Solution” unless that is the best avenue for a positive lesson. Your influence could wrongly infer there is only one right answer and inhibit independent solutions.

## **Post Exercise**

- Review the intent of the exercise:
  - Exercise decision-making skills in a tactical context.
  - Practice communicating decisions.
  - Provide experience to develop pattern recognition skills.
  - Illustrate tactical concepts.
  - Develop implicit understanding within the group.
- Reinforce lessons learned by offering an historical account of a similar scenario.
- Encourage evaluation of your performance as facilitator.
- Encourage continued debate and replay.

# **S-230 TDG Exercise**

## **“SOUTHERN CALIFORNIA”**

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals.

### **Resources and role players:**

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- Division group supervisor (group facilitator).

### **SCENARIO:**

You are the leader of a Type 1 hand crew assigned to construct indirect handline downhill. Your crew has been working together all summer, and you feel confident in your troops. You are equipped with four chain saws, a full complement of hand tools, and seven programmable radios.

### **Facilitator briefing to the students:**

The night division group supervisor (DIVS) is on scene when you arrive with your crew. He provides you with a quick “face to face” briefing, and then leaves to line out the other incoming resources. The specific information for your assignment is to anchor your line to a road at the top of the canyon, and then progress indirect, down into the canyon towards the “inactive” main fire in the bottom. His instructions are to “complete the line and drag fire with you. I will try to find a few engines to support you from your anchor point.”

**Describe the following weather and fuel conditions:**

Temperature – low 70’s; relative humidity – mid teens; wind light, Santa Ana conditions; fuel type is 3'-8' tall chaparral stands, under drought conditions.

During your travel out to the fireline, you notice that the fire looks like it is starting to “lay down” for the evening. You can see the main fire down in the canyon, and you notice a “cold edge” or some light smoke coming up from the inactive edge. It is mid November, and the time is 2000 hours.

**Facilitator “Murphy’s Law” suggestions:**

The “Murphy’s Law Suggestions” listed below can be added as “What If’s” at any time during the scenario to raise the stress level of the leader or use one of your own:

- The fuels make foot travel difficult.
- Rolling rocks become a problem.
- Cannot find a good location for the lookout.
- Wind shifts or increases.
- Other crew members voice differing opinions.
- The facilitator role plays a concerned division supervisor demanding feedback.

**Facilitator’s Notes:**

This exercise should focus on the functions of the Crew Boss level decision making and communication.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

N33 02.190'  
W116 41.980'

# S-230 TDG Exercise

## “SOUTHWEST”

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals.

**Resources and role players:**

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- Division group supervisor (group facilitator).

**SCENARIO:**

You are the leader of a Type 2 hand crew being assigned to support four Type 1 hotshot crews on a burn out assignment. Your crew has not worked together for very long but you know they have been trained well as you did it yourself. This is your crew’s first fire and everyone is excited about getting out and throwing some dirt. The crew consists of you, seven second-season firefighters, and 12 rookie firefighters. You are equipped with one chain saw, two backpack pumps, a full complement of hand tools, and four programmable radios.

**Facilitator briefing to the students:**

The division group supervisor (DIVS) is swamped; he is dealing with five engine strike teams in the subdivision your firing operation will protect, if successful. He calls you on the radio and gives you the specific information for your assignment. His instructions are to “work with the Hotshot crews, I’ll try to get you some help if you need it, but for now you are on your own. Hey! Let’s be careful out there.”

As you travel to the fire in your assigned contract bus, you note the weather and fuel conditions.

**Describe the following weather and fuel conditions:**

Temperature – high 90’s; relative humidity – low teens; gusty, erratic wind; fuel conditions are thick ponderosa pine stands.

Also, during your travel out to the fireline, you notice that the fire looks like it is starting to build a nice column. After arriving at the drop point, you see an indirect dozer line heading down the hill below you. You can’t see the main fire, but notice smoke coming up from over the next ridge. It is July and the time is 1000 hours.

**Facilitator “Murphy’s Law” suggestions:**

The “Murphy’s Law Suggestions” listed below can be added as “What If’s” at any time during the scenario to raise the stress level of the leader or use one of your own:

- The fuels make foot travel difficult.
- Time of day is later in the burning period.
- Cannot see any sign of the fire during the approach.
- Wind shifts or increases.
- Other crew members voice differing opinions.
- The facilitator role plays a concerned DIVS demanding feedback.

**Facilitator’s Notes:**

This exercise should focus on the functions of the Crew Boss level decision making and communication.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

N34 22.009'  
W111 14.333'

# S-230 TDG Exercise

## “ALASKA”

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals.

**Resources and role players:**

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- Incident Commander (group facilitator).

**SCENARIO:**

You are the Crew Boss of a 16-person native Alaskan crew that you met briefly two hours earlier. One of your crew members has a radio and extensive experience as a liaison.

This is your first time in Alaska. You have been in McGrath for three days waiting for a fire assignment. You have had an eight-hour course “Alaska Fire Training.” Two hours earlier at 1000, a load of smokejumpers flew to a new start, Fire #X-357” approximately 100 miles to the northeast. You and your crew, “Fort Yukon #3” arrive on the fire by helicopter.

### **Facilitator briefing to the students:**

The smokejumper Incident Commander radios your instructions: “Anchor in at the south flank, gear up to work through the night.” You are presently at the helibase. Your cargo has one chain saw with complete kit, three backpack pumps, full complement of hand tools, a portable pump with 1,000 feet of hose, and fittings.

The fuels consist of tundra with an overstory of black spruce varied from open to dense stands. The fire is burning at a moderate rate of spread. Flame height in the tundra is 2 feet, but gusty winds have created major crowning runs in the thick stands of spruce at the head of the fire. Short range spotting has occurred. The fire is 500 acres with good spread potential. The time is now 1430.

### **Describe the following weather conditions:**

Temperature - 78; relative humidity - 22%; mid-flame wind, south-southwest, 3-8 mph with gusts of 10-12 mph.

### **Facilitator’s “Murphy’s Law” suggestions:**

The “Murphy’s Law Suggestions” listed can be added as “What If’s” at any time during the scenarios to raise the stress level of the leader or use one of your own.

- Crew has not had lunch, wants to eat before working.
- Safety zone is inadequate or not accessible.
- Anchor point is not clearly defined.
- Inexperienced sawyer and is not using proper safety procedures.
- Communication with Incident Commander is one way.
- Spot fire.
- Wind shift.
- Experienced crew member gets annoying.

### **Facilitator’s Notes:**

This exercise should focus on the functions of the Crew Boss level decision making and communication.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

Alaska

# S-230 TDG Exercise

## “SOUTHEAST”

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals. The Crew Boss must mitigate other potential threats to the crew welfare.

**Resources and role players:**

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- Group facilitator.

**SCENARIO:**

You are a Crew Boss of a Type 2 crew. It is late in the season and your crew is experienced and dependable. You have been on the Daniel Boone National Forest, Redbird Ranger District, for three days. It is the first week of November and the fall rains have not yet arrived. Some of the local population starts a fire as a Halloween tradition. You have worked in this country before as a crew member and know not to be deceived by the leaf litter. Your available resources are: division group supervisor, Type 2 helicopter w/bucket, two Type 6 engines, another Type 2 crew, and a water tender. Travel time is an issue.

### **Facilitator briefing to the students:**

You are first to arrive on scene at 1630 on a fire going uphill with good spread potential. The slope is 20% with a southern aspect. As you are surveying the fire from a dirt lot behind a rural convenience store, you observe locals drinking beer and watching from the corner of the building.

### **Describe the following weather and fuel conditions:**

Temperature - 75; relative humidity - 40%; wind steady, northeast 3-4 mph; fire on the ground in fuel model 9.

### **Facilitator's "Murphy's Law" suggestions:**

The "Murphy's Law Suggestions" listed can be added as "What If's" at any time during the scenarios to raise the stress level of the leader or use one of your own.

- Wind speed increases.
- Communication with other resources is poor due to repeater location and canyons (hollers).
- The locals begin catcalling and whistling at your female crew members.
- A local volunteer fire department shows up and begins to take over command.
- A new fire begins down the road.
- Fire takes off rapidly.

### **Facilitator's Notes:**

This exercise should focus on the functions of the Crew Boss level decision making and communication.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

Daniel Boone National Forest, Kentucky

# S-230 TDG Exercise

## “NORTHWEST”

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals.

**Resources and role players:**

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- Incident Commander Type 3 (ICT3) (group facilitator).

**SCENARIO:**

You are assigned as a Type 2 Crew Boss of a mixed crew made up of personnel from the BLM, U.S. Forest Service, and National Park Service. You and your crew are being dispatched to an extended attack fire on an adjoining forest. A Type 1 Incident Management Team has been ordered for this incident but is not going to be in place for three days due to a shortage of resources. A Type 3 Incident Commander (ICT3) with a supporting organization of two division group supervisors (DIVS) and a Type 2 safety officer (SOF2) are managing the fire.

**Facilitator briefing to the students:**

Upon arrival at the Incident Command Post you are given a complete briefing by the ICT3. The ICT3 informs you that your crew, along with two additional Type 2 hand crews, are assigned to the east side of the fire. Your mission is to establish an anchor point at DP-2 and construct handline along the east flank of the fire to H-2, approximately 1½ miles. The crews will spike out at H-2 and continue line construction from there.

**Describe the following weather and fuel conditions on July 10th at 1000:**

Temperature - 78; relative humidity - 23%, eye level wind at the bottom of the fire, south at 5 mph; fuel model in the fire area, FM 8 and FM 10. The weather forecast calls for southwest ridge top wind of 8-10 with gusts of 15-20 MPH; minimum relative humidity in the low teens; high temperatures in the low 90's; Haines Index is 6.

Current fire behavior is flame lengths of 1-3 feet with isolated torching and short range (50-100') spotting up hill and down wind.

**Facilitator's "Murphy's Law" suggestions:**

The "Murphy's Law Suggestions" listed can be added as "What If's" at any time during the scenarios to raise the stress level of the leader or use one of your own.

- The fuels make foot travel difficult.
- Time of day is later in the burning period.
- Fire has advanced into a large area of bug killed timber.
- Wind shifts or increases.
- Other crew members voice differing opinions.
- The IC has decided to fly one crew (yours) into H-2 to build line to the southwest.

**Facilitator's Notes:**

This exercise should focus on the functions of the Crew Boss level decision making and communication.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

Washington State

# S-230 TDG Exercise

## “ROCKY MOUNTAIN”

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals.

### Resources and role players:

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- District duty officer (group facilitator).

### SCENARIO:

You are assigned as a Type 2 Crew Boss of a Type 2 hand crew. Your crew has been staged in Durango, Colorado for the past three days. Your crew was sent to Colorado as a contingency crew because of the severe drought and extreme fire hazard conditions there. Your crew is made up of two 10-person district initial attack modules from the Lincoln National Forest. You are familiar with a few of the crew members, but not the squad leaders. The crew is starting to get anxious and bored waiting for a fire.

It is July 6; at 0600 you get a call to your motel room from dispatch to report to the fire center for a fire assignment. At 0700 you get your resource order and driving directions to the fire. Your travel time is five hours. The fire you are going to started two days ago and is currently 100 acres.

### **Facilitator briefing to the students:**

At 13:00 you arrive at the Incident Command Post (ICP) and receive a quick briefing from the district duty officer. The duty officer tells you to get your crew to helibase immediately to fly to the fire, the crew on the fire needs help. Your assignment is to fly to H-1 and assist in building line from H-1 to the bottom of the fire. The crew on the fire hiked in, built the helispot, and started constructing line from that point on the northeast side of the fire yesterday.

### **Describe the following weather and fuel conditions:**

Temperature - 85; low relative humidity possibly in the single digits and a Red Flag Warning; strong southwest wind in the afternoon; FM 4. Fire behavior is currently smoldering with occasional flare-ups. Slope is 50-100%.

### **Facilitator's "Murphy's Law" suggestions:**

The "Murphy's Law Suggestions" listed below can be added as "What If's" at any time during the scenario to raise the stress level of the leader or use one of your own:

- The fuels make foot travel difficult.
- Time of day is later in the burning period.
- Ten foot tall brush is underburned with intact canopy
- Wind shifts or increases.
- Other crew members voice differing opinions.
- The IC has decided to fly one crew (yours) into H-2 to build line to the southwest.

### **Facilitator's Notes:**

This exercise should focus on the functions of the Crew Boss level decision making and communication.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

Colorado

# S-230 TDG Exercise

## “EASTERN AREA”

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals.

### **Resources and role players:**

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- Division group supervisor (group facilitator).

### **SCENARIO:**

You are the Crew Boss for a Type 2 contract crew from Puerto Rico. The crew has a full season of experience working together along with three squad bosses (FFT1s) and a Crew Boss trainee (CRWB-T). You have been told that the fire has made several extensive runs and a Type 1 incident management team is transitioning into place sometime this evening.

### **Facilitator briefing to the students:**

At the briefing you are assigned to division C (DIV C) and are instructed to transport your crew to the north end of Road #422 (close to the DIV B/C break). Overnight the fire perimeter has reached Road #422 in the headwaters of Murray and Jack Branch. Your assignment is to burn out and secure the DIV C line before the fire approaches from the south.

### **Describe the following weather and fuel conditions:**

High temperature - 70, wind - east to south 10-15 mph; relative humidity, maximum >80%, minimum 25%, **Red Flag Warning due to low relative humidity and dry fuels.**

Two Type 2 and one Type 1 helicopters are available for bucket work.

### **Facilitator's "Murphy's Law" suggestions:**

The "Murphy's Law Suggestions" listed below can be added as "What If's" at any time during the scenario to raise the stress level of the leader or use one of your own:

- After arriving at the DIV B/C break, you notice an active fire perimeter with flame lengths of 3-4 feet average and some areas 8-10 feet. The fire has bumped the line at the DIV break and is spreading east, uphill towards your line. The line consists of a combination of dozer line, one lane road (422), and the North Carolina/Tennessee state boundary line.
- Using the map, plan your burnout operation, including escape routes and safety zones.
- Your burnout operation is proceeding smoothly when you notice smoke rising from a drainage to your north. You investigate and find a 1 acre spot actively spreading uphill, to the south, towards your crew.

**Have the Crew Boss describe their plan, actions, and communications.**

- One of your squads has completed lining the spot and radios you to let you know that their sawyer has cut his leg and will need to be evacuated.

**Have the Crew Boss describe their plan, actions, and communications.**

- After successfully evacuating your injured firefighter, you continue your assignment, burning out and securing your line. Following completion of your assignment your division supervisor compliments your crew on their top notch performance.

**Facilitator's Notes:**

This exercise should focus on the functions of the Crew Boss level decision making and communication.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

North Carolina

# S-230 TDG Exercise

## “MIDWEST”

**Target Audience:** Crew Boss (Single Resource)

**Training Objective:** (Do not read this objective to the students before the exercise) Given the scenario below, the Crew Boss must decide how the assignment can be safely approached and then verbally communicate their decision to the appropriate individuals.

### **Resources and role players:**

- Area for student group to work scenario away from the other student groups.
- Topographic map with fire perimeter associated with coordinating scenario.
- District assistant fire management officer, Incident Commander (group facilitator).

### **SCENARIO:**

#### **Initial Attack—Lightning Fire on the Nebraska National Forest**

You are called at 1230 on September 6 with your Type 4 six pack engine with a crew of five. You and your crew are from the neighboring district. The information you have about the fire is that it is in ponderosa pine with grass under story and is 1-2 acres in size.

#### **Facilitator briefing to the students:**

You arrive at the district office and meet with the local assistant fire management officer (AFMO). He gives you the legal location to a new start that has occurred on the district. He believes that volunteer fire department engines are on the fire at this time. He is in a hurry and can not give you any more details at this point. There is a lot of activity in the area and he is very busy. He will contact dispatch and let them know you are en route.

You arrive at the fire at 1515 and tie in with IC Smith, an engine captain from the local volunteer fire department (VFD). The VFD's have radio communication with each other, but only one radio that can communicate with you and your crew. The fire is 3 acres and burning on a southeast facing slope. The fire appears to have started mid-slope and burned to the drainage bottom, and over the top of the ridge. At this time the fire behavior consists of a ground fire (0-2 foot flame lengths) that is contained within the wet line and limited scratch line.

**Describe the following weather conditions:**

Temperature - 75; relative humidity - 35%; wind south at 10 mph. The weather forecast has predicted strong wind from the south later this afternoon.

Three VFD engines on the fire have knocked down the fire with water and completed some scratch line. Dispatch calls and requests that you release the VFD engines due to the heavy activity in the area. You agree to release the VFD engines and take over command of the fire, now performing as an ICT4 and CRWB.

**Facilitator's "Murphy's Law" suggestions:**

The "Murphy's Law Suggestions" listed below can be added as "What If's" at any time during the scenario to raise the stress level of the leader or use one of your own:

- Spot fires are discovered below your fire line and to the east.
- Spot fires become established in the crowns as wind speed increases from the south.
- Due to the high activity in the area, resources are difficult to get.
- Fire activity increases significantly.
- Single engine air tanker, eight VFD engines, local timber company dozer and low boy arrive and are awaiting your instructions.
- An ICT3 is ordered and will arrive at 1900 on the fire.

## **AFTER ACTION REVIEW (AAR):**

Conduct an AAR with focus on the training objective. Use the AAR format found in the Incident Response Pocket Guide to facilitate the AAR. There are four basic questions in the AAR.

1. What was planned?
2. What actually happened?
3. Why did it happen?
4. What can we do next time?

Remember, the AAR should focus on the what and why, not the who. There is no single solution; keep the focus of the AAR on what was done and why.

## **TOPOGRAPHIC MAP LOCATION**

Nebraska National Forest

## **UNIT 5 – OFF LINE DUTIES**

### **INSTRUCTOR NOTES**

Begin this unit by explaining that the Crew Boss has assistants who will help them if they are trained and given an opportunity to assist. The instructor should use the questions provided in the outline but should not feel constrained to use only these questions. Do not provide answers to the questions; instead lead students to answer the questions by asking them less complicated questions until they determine the answers for themselves.

The instructor for this unit should spend extra time developing additional questions to assist in the instruction of this unit.



DETAILED LESSON OUTLINE

COURSE: Crew Boss (Single Resource), S-230

UNIT: 5 – Off Line Duties

TIME: 1 Hour

TRAINING AIDS: Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers.

- OBJECTIVES: Upon completion of this unit, students will be able to:
1. Describe the responsibilities the Crew Boss considers prior to returning to the incident base from a tactical assignment.
  2. List the key responsibilities of the Crew Boss following tactical assignments while at the incident base or camp.
  3. List the key responsibilities of the Crew Boss when the crew is out of service.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	05-01-S230-EP
<b>PRESENT UNIT OBJECTIVES.</b>	05-02-S230-EP
<b>ENSURE ALL STUDENTS FULLY UNDERSTAND THE UNIT OBJECTIVES.</b>	

OUTLINE	AIDS & CUES
<p>I. OFF LINE DUTIES</p> <p><b>SOLICIT RESPONSES TO THE FOLLOWING QUESTIONS:</b></p> <p>A. When does a Crew Boss start planning off line duties?</p> <ul style="list-style-type: none"> <li>• Upon receipt of an assignment.</li> </ul> <p>B. What is the common factor Crew Bosses base their planning upon?</p> <ul style="list-style-type: none"> <li>• Time frames</li> </ul> <p>C. What should a Crew Boss consider regarding departure from an incident assignment?</p> <ul style="list-style-type: none"> <li>• Transportation arrangements (walk, drive, or fly). Coordinate with immediate supervisor.</li> <li>• Ensure drivers are rested and vehicles are in proper working order.</li> <li>• Time frames, i.e., ETA back to base for meal arrangement.</li> <li>• Briefing with relief Crew Boss.</li> <li>• Can you abandon the line without your relief being in place (hotline hand-off)?</li> <li>• Crew needs and status of equipment (has back haul been completed; enough fuel for pumps?).</li> </ul>	<p>05-03-S230-EP</p> <p>05-04-S230-EP</p> <p>05-05-S230-EP</p>

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Equipment ready for next operational period?</li> <li>• Facilitate an AAR.</li> </ul> <p>D. Prior to leaving an assignment and/or during travel status back to base in preparation for the next fire suppression operational period assignment, what functions should the Crew Boss have crew personnel perform?</p> <ul style="list-style-type: none"> <li>• Maintain tools and saws.</li> <li>• Fill canteens.</li> <li>• Top off saw gas/oil if available (unless traveling by air).</li> <li>• Generate equipment needs list (personal and crew).</li> <li>• Determine medical issues and needs.</li> <li>• Police the area.</li> <li>• Improve line.</li> <li>• Prepare passenger/cargo manifest.</li> </ul>	<p>05-06-S230-EP</p>

OUTLINE	AIDS & CUES
<p>E. When flying by helicopter back to the incident base, which load should the Crew Boss usually fly out with and why?</p> <ul style="list-style-type: none"> <li>• Last load <ul style="list-style-type: none"> <li>- Accountability for personnel.</li> <li>- Ensure crew welfare.</li> <li>- Deal with potential logistical and tactical considerations. Time to brief replacement.</li> <li>- Squad bosses can initiate crew activities at the helibase.</li> </ul> </li> </ul>	05-07-S230-EP
<p>F. What Crew Boss responsibilities can be delegated to a subordinate supervisor following a tactical assignment while at base or camp?</p> <ul style="list-style-type: none"> <li>• Evaluate performance (physical and mental).</li> <li>• Feed crew.</li> <li>• Water crew.</li> <li>• Re-supply crew and equipment.</li> <li>• Fuel vehicles.</li> <li>• Turn in tools and radios as required.</li> <li>• Communicate crew wake up time for next operational period.</li> </ul>	05-08-S230-EP

OUTLINE	AIDS & CUES
<p>G. What does the Crew Boss do when the crew is performing off line duties?</p> <ul style="list-style-type: none"> <li>• Plan for new activities.</li> <li>• Coordinate with the division/group supervisor, Crew Bosses, and other overhead personnel.</li> <li>• Train crew personnel performing various jobs.</li> <li>• Work with the crew if adequate supervision exists.</li> <li>• Catch up on crew time reports.</li> </ul>	05-09-S231-EP
<p>H. What should the Crew Boss do to improve morale of the crew?</p> <ul style="list-style-type: none"> <li>• Consistently keep the crew informed.</li> <li>• Work with incident training specialist (TNSP): <ul style="list-style-type: none"> <li>- to provide for trainee assignments.</li> </ul> </li> <li>• Work with facilities to ensure: <ul style="list-style-type: none"> <li>- access to phone</li> <li>- access to commissary</li> <li>- access to showers</li> <li>- access to laundry</li> <li>- adequate food is available</li> <li>- sleeping areas are quiet</li> </ul> </li> <li>• Ensure work/rest guidelines are followed.</li> </ul>	05-10-S230-EP

OUTLINE	AIDS & CUES
<p>I. When should the Crew Boss plan for crew activities?</p> <ul style="list-style-type: none"> <li>• Ongoing - plan activities before they need to be completed. Anticipate needs and plan for them.</li> </ul>	05-11-S230-EP
<p>J. What should a Crew Boss do at base or in camp following a tactical assignment?</p> <ul style="list-style-type: none"> <li>• Brief the crew on expectations for the next operational period.</li> <li>• Make specific assignments to squad bosses.</li> <li>• Continue to ensure crew welfare, safety, and proper conduct.</li> <li>• Debrief direct supervisor and/or brief incoming operational period supervisor.</li> <li>• Solve the problems that are solvable.</li> <li>• Plan for the next operational period.</li> <li>• Notify facility unit leader of sleeping area location.</li> <li>• Turn crew time reports in to finance/administration.</li> <li>• Complete a ICS 214, Unit Log, if required.</li> <li>• Turn in accident reports and initiate compensation claims, if applicable.</li> </ul>	05-12-S230-EP

OUTLINE	AIDS & CUES
<p>K. Crew welfare and conduct should both be considered Crew Boss responsibilities while the crew is out-of-service. What are two other primary responsibilities?</p> <ul style="list-style-type: none"> <li>• Administrative responsibilities.</li> <li>• Communication of crew status.</li> </ul>	05-13-S230-EP
<p>L. When is a Crew Boss responsible for crew members during off shift periods?</p> <ul style="list-style-type: none"> <li>• Always responsible.</li> </ul>	05-14-S230-EP
<p>M. How can a Crew Boss personally provide for medical attention to his or her crew?</p> <ul style="list-style-type: none"> <li>• Obtain necessary crew first aid supply.</li> <li>• Consider and arrange light duty assignments for injured crew members.</li> <li>• Provide escort for crew members with injuries or illness.</li> <li>• Provide proper documentation through agency specific accident report forms.</li> </ul>	05-15-S230-EP
<p>N. What form must be completed for a crew member requiring medical attention at a medical facility?</p> <ul style="list-style-type: none"> <li>• CA-16, Authorization for Examination and/ or Treatment or agency equivalent form.</li> </ul>	05-16-S230-EP

OUTLINE	AIDS & CUES
<p>O. Why is it important for the Crew Boss to ensure that CA-1 and CA-16 forms or agency equivalent forms are <u>promptly</u> completed for any crew member injured on-the-job and requiring medical attention?</p> <ul style="list-style-type: none"> <li>• Protection of the individual.</li> <li>• Protection of the agency.</li> </ul>	05-17-S230-EP
<p>P. When completing forms involving claims for lost, stolen or damaged property, what incident personnel may the Crew Boss coordinate with?</p> <ul style="list-style-type: none"> <li>• Division group supervisor (DIVS).</li> <li>• Compensation claims unit leader (COMP).</li> <li>• Security manager (SECM).</li> </ul>	05-18-S230-EP
<p>Q. What other personnel does the Crew Boss have available on the crew to accomplish off line responsibilities?</p> <ul style="list-style-type: none"> <li>• Squad bosses.</li> <li>• Crew emergency medical technicians (EMTs).</li> <li>• Intra-crew managers (saw boss, supply person, vehicle manager).</li> <li>• Interagency crew representative.</li> </ul>	05-19-S230-EP

OUTLINE	AIDS & CUES
<b>REVIEW UNIT OBJECTIVES.</b>	05-20-S230-EP
<b>CLARIFY ANY QUESTIONS STUDENTS MAY HAVE REGARDING THIS UNIT.</b>	
<b>PRESENT THE UNIT QUIZ. ALLOW 15 MINUTES FOR COMPLETION.</b>	05-21-S230-EP
<b>HAND OUT THE QUIZ SOLUTION AND REVIEW WITH THE STUDENTS. REMIND STUDENTS THE QUIZ ANSWERS ARE TO BE USED AS STUDY AIDS FOR THE FINAL EXAM.</b>	05-01-S230-HO IG p.13
<b>HAVE STUDENTS COMPLETE AND TURN IN A UNIT EVALUATION FORM.</b>	



## UNIT 5 QUIZ SOLUTION

1. What duties should the Crew Boss consider accomplishing prior to returning to the incident base from a tactical assignment?
  - **Maintain tools and saws.**
  - **Fill canteens.**
  - **Top off saw gas/oil if available (unless traveling by aircraft).**
  - **Generate equipment needs list (personal and crew).**
  - **Determine medical issues and needs.**
  - **Evaluate performance (physical and mental).**
  
2. What other personnel does the Crew Boss have available on the crew to accomplish these duties?
  - **Squad bosses.**
  - **Crew EMTs.**
  - **Intra-crew managers (saw boss, supply person, vehicle manager, etc.)**
  
3. List five items a Crew Boss should consider as responsibilities following tactical assignments before arriving at base or camp:
  - **Arrange transportation through DIVS.**
  - **Ensure drivers are rested and vehicles are in proper working order.**
  - **Perform tool and or saw maintenance on line or at drop point when possible.**
  - **Notify base of crew's ETA to arrange for meals or commissary if necessary.**
  - **Solicit crew needs; consider medical equipment and commissary items.**
  - **Brief relief crew on line if possible.**
  - **Take head count before leaving work area.**

4. When flying by helicopter back to the incident base the Crew Boss should normally make sure he or she is manifested on the:
  - a. First load
  - b. Second load
  - c. **Last load**
  - d. Does not matter which load.
  
5. What Crew Boss responsibilities can be delegated to a subordinate supervisor following a tactical assignment while at the incident base or camp? List four.
  - **Feed crew**
  - **Water crew**
  - **Re-supply crew**
  - **Fuel vehicles if dedicated or assigned to a crew.**
  - **Turn in tools as required.**
  - **Communicate crew wake up time for next operational period.**
  
6. List three key responsibilities a Crew Boss has prior to going out-of-service.
  - **Debrief situation unit.**
  - **Refurbish and or re-supply equipment.**
  - **Turn crew time in to finance/administration.**
  - **Notify facility unit leader of sleeping area location.**
  
7. Crew welfare and crew conduct should both be considered Crew Boss responsibilities while the crew is out of service. Circle two other primary responsibilities.
  - a. **Administrative responsibilities**
  - b. **Communication of crew status**
  - c. Communication through home unit supervisor
  - d. Develop Incident Action Plan (IAP)
  - e. Secure line assignments that will meet crew training needs.

8. During out-of-service periods, what responsibilities does a Crew Boss have for providing medical attention to his or her crew? List three.
- **Providing escort for crew members with injuries or illness.**
  - **Providing proper documentation through agency specific accident report forms.**
  - **Obtaining necessary crew first aid supply.**
  - **Considering and arranging light duty assignments for injured crew members.**
9. When completing forms involving claims for lost, stolen or damaged property, what incident personnel may the Crew Boss coordinate with?
- a. Division group supervisor
  - b. Compensation/claims unit leader
  - c. Security manager
  - d. All of the above**
  - e. a and c
10. Explain why it is important for the Crew Boss to ensure that medical forms are promptly completed for any crew member injured on-the-job and requiring medical attention.
- **Protection of the individual**
  - **Protection of the agency**



## **UNIT 6 – DEMOBILIZATION AND POST INCIDENT RESPONSIBILITIES**

### **INSTRUCTOR NOTES**

This unit is designed to be presented through a series of questions, similar to the process used in Unit 5. Instructors who present this unit should be skilled in the demobilization process and familiar with the re-supply procedures that crews are required to follow when re-supplying items on fires.



## DETAILED LESSON OUTLINE

**COURSE:** Crew Boss (Single Resource), S-230

**UNIT:** 6 – Demobilization and Post Incident Responsibilities

**TIME:** 1 Hour

**TRAINING AIDS:** Personal computer with LCD projector and presentation software; flip charts with paper for each group; felt tip markers.

**OBJECTIVES:** Upon completion of this unit, students will be able to:

1. Describe procedures for re-supply of fire expended items.
2. List the steps necessary for the demobilization of a crew from an incident.
3. List the key responsibilities of a Crew Boss prior to disassembly of crew at the initial mobilization point.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	06-01-S230-EP
<b>PRESENT UNIT OBJECTIVES.</b>	06-02-S230-EP
<b>ENSURE THAT ALL STUDENTS FULLY UNDERSTAND THE UNIT OBJECTIVES.</b>	

OUTLINE	AIDS & CUES
<p>I. RE-SUPPLY</p> <p><b>DESCRIBE RE-SUPPLY TO THE STUDENTS.</b></p> <p>Re-supply: restocking property and supplies lost, damaged, or consumed on an incident. Re-supply can occur from the supply unit at the incident, local cache, or from other sources at the home unit.</p> <p><b>SOLICIT RESPONSES TO THE FOLLOWING QUESTIONS:</b></p> <p>A. When should fire-expended items be re-supplied back at your home unit? What type of items should be considered?</p> <ul style="list-style-type: none"> <li>• When they are unable to be refurbished at the incident (capitalized equipment).</li> <li>• When specialty tools/items are involved.</li> <li>• Any items the incident supply unit does not have.</li> </ul> <p>B. When should fire-expended items be re-supplied at the incident?</p> <ul style="list-style-type: none"> <li>• Prior to demobilization or reassignment.</li> <li>• Whenever the supply unit has all the items needed for re-supply.</li> <li>• Whenever it is possible.</li> </ul>	<p>06-03-S230-EP</p> <p>06-04-S230-EP</p>

OUTLINE	AIDS & CUES
<p>C. What types of items need to be considered?</p> <ul style="list-style-type: none"> <li>• All items to be refurbished, including specialty items if they are located at the supply unit.</li> </ul> <p>D. Why should items be re-supplied at the incident whenever possible?</p> <ul style="list-style-type: none"> <li>• To ensure readiness for reassignment.</li> <li>• To prevent procurement delays.</li> <li>• To meet agency administrative policies.</li> </ul>	06-05-S230-EP
<p>E. Prior to demobilization, what should be done to re-supply expended items that cannot be replaced by the incident supply unit?</p> <ul style="list-style-type: none"> <li>• Inventory the items for the supply unit.</li> <li>• Use appropriate incident/agency reorder forms complete with request numbers (incident replacement requisition form or ICS 213, General Message). Have it signed by the incident commander or designee (supply unit leader, operations section chief).</li> <li>• Provide the crew equipment inventory list to the supply unit leader.</li> </ul>	06-06-S230-EP

OUTLINE	AIDS & CUES
<p>F. Prior to demobilization, what can be done to aid in the re-supply of expended items when there is not an incident supply unit present?</p> <ul style="list-style-type: none"> <li>• Obtain a signed justification from your appropriate operations supervisor (strike team leader, division group supervisor, Incident Commander).</li> <li>• Obtain written permission from the Incident Commander or designee to re-supply through local area dispatch.</li> </ul>	06-07-S230-EP
<p>II. DEMOBILIZATION PROCEDURES</p>	
<p>A. What sources of information does the Crew Boss have available to keep informed of the demobilization process?</p> <ul style="list-style-type: none"> <li>• Watch the bulletin board for demobilization information and list.</li> <li>• Check with the planning unit.</li> <li>• Attend operational period briefings.</li> <li>• Other operations personnel.</li> </ul>	06-08-S230-EP

OUTLINE	AIDS & CUES
<p>B. What issues does the Crew Boss need to consider before being reassigned to another incident?</p> <ul style="list-style-type: none"> <li>• Crew morale.</li> <li>• Crew health.</li> <li>• Vehicle/equipment maintenance needs.</li> <li>• Number of days left, i.e., work/rest guidelines.</li> </ul>	06-09-S230-EP
<p>C. What ICS form is usually used in the demobilization process?</p> <ul style="list-style-type: none"> <li>• ICS 221, Demobilization Checkout.</li> </ul>	06-10-S230-EP
<p>D. Where does the Crew Boss obtain the ICS 221 form?</p> <ul style="list-style-type: none"> <li>• Demobilization unit.</li> <li>• Planning unit.</li> </ul>	06-11-S230-EP
<p>E. What actions that must be completed prior to demobilization from an incident?</p> <ul style="list-style-type: none"> <li>• Determine the demobilization process.</li> <li>• Obtain all emergency firefighter time reports from finance/administration unit.</li> <li>• Obtain all medical injury paperwork (CA-1, CA-16), if applicable.</li> </ul>	06-12-S230-EP

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Obtain crew performance evaluation if applicable. Trainees are required to get an evaluation; check with the incident training specialist (TNSP).</li> <li>• Clean sleeping area.</li> <li>• Prepare gear for flight/travel.</li> <li>• Have vehicles inspected.</li> <li>• Turn in any accountable equipment/property to the supply unit.</li> <li>• Feed the crew and obtain lunches, when appropriate.</li> <li>• Re-supply fire expended items, if possible.</li> <li>• Return checked-out radios to communications unit.</li> <li>• Notify home unit.</li> </ul>	
<p>F. What is the Crew Boss required to do after receiving the ICS 221 form?</p> <ul style="list-style-type: none"> <li>• Check out with each functional unit indicated on form and obtain the unit leader's signature.</li> <li>• Return the ICS 221 to the last unit as instructed.</li> </ul>	06-13-S230-EP

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• To expedite the demobilization process, crew time reports should be current before proceeding with demobilization.</li> </ul> <p>G. As part of the demobilization process, when does the Crew Boss need to ensure that individual crew members sign or initial their personal firefighter time reports (FTR)?</p> <ul style="list-style-type: none"> <li>• After checking the time reports for accuracy.</li> <li>• Everyone must sign or initial their FTR if they have charged commissary items to their time sheet.</li> <li>• When required by the incident management team.</li> </ul>	06-14-S230-EP
<p>III. POST-INCIDENT RESPONSIBILITIES</p> <p>A. The Crew Boss is responsible for what duties during return travel status?</p> <ul style="list-style-type: none"> <li>• Arranging meals for crew personnel.</li> <li>• Arranging/confirming lodging for the crew.</li> <li>• Maintaining proper crew conduct.</li> <li>• Maintaining contact with agency dispatch office regarding travel status.</li> </ul>	06-15-S230-EP

OUTLINE	AIDS & CUES
<ul style="list-style-type: none"> <li>• Ensure drivers are rested and vehicles are in proper working order.</li> <li>• Providing/scheduling rest stops.</li> <li>• Selecting travel routes when appropriate.</li> <li>• Keeping crew members informed (new assignment, travel plans).</li> </ul> <p>B. What are the primary responsibilities of a Crew Boss prior to disassembly of crew at home unit?</p> <ul style="list-style-type: none"> <li>• Check with agency dispatcher.</li> <li>• Complete any required agency reports or records.</li> <li>• Ensure that all crew members have adequate transportation to their point of mobilization.</li> <li>• Ensure work/rest guidelines are followed.</li> <li>• Perform short incident critique with the crew (AAR).</li> <li>• Complete performance evaluations, if required.</li> <li>• Ensure equipment and supplies are fire ready.</li> </ul>	<p>06-16-S230-EP</p>

OUTLINE	AIDS & CUES
<p>C. Why should a critique of the incident be performed with the crew (AAR)?</p> <ul style="list-style-type: none"> <li>• Lessons learned.</li> <li>• To improve group performance.</li> <li>• To improve safety awareness.</li> <li>• To gather group impressions and evaluation.</li> <li>• To identify any improvements needed.</li> <li>• To recognize outstanding efforts.</li> </ul>	06-17-S230-EP
<p><b>REVIEW UNIT OBJECTIVES.</b></p>	06-18-S230-EP
<p><b>CLARIFY ANY QUESTIONS STUDENTS MAY HAVE REGARDING THIS UNIT.</b></p>	
<p><b>PRESENT THE UNIT QUIZ. ALLOW 15 MINUTES FOR COMPLETION.</b></p>	06-19-S230-EP
<p><b>HAND OUT THE QUIZ SOLUTION AND REVIEW WITH THE STUDENTS. REMIND STUDENTS THE QUIZ ANSWERS ARE TO BE USED AS STUDY AIDS FOR THE FINAL EXAM.</b></p>	06-01-S230-HO IG p. 13
<p><b>HAVE STUDENTS COMPLETE AND TURN IN A UNIT EVALUATION FORM.</b></p>	



## UNIT 6 QUIZ SOLUTION

1. Expended items that cannot be replaced by the incident supply unit should be:  
(Choose the best answer.)
  - a. Justified by the division supervisor prior to demobilization.
  - b. Inventoried and signed off by the supply unit leader prior to demobilization.
  - c. Ordered before demobilization through dispatch.
  - d. Justified or approved by the Incident Commander.**
  - e. Purchased on the way home.
  
2. List two sources of information a Crew Boss has available to keep informed of demobilization process.
  - **Watch bulletin board for demobilization list.**
  - **Obtain instructions from planning section.**
  - **Attend operational period briefings.**
  
3. Why should a critique of the incident be done with the crew prior to disassembly back at the home unit? List three reasons.
  - **Time factor/things fresh in mind.**
  - **Group evaluation and impressions.**
  - **Identify improvements to make for next assignment.**
  - **Follow up on critique items requiring further action.**
  - **Organize for next assignment.**
  - **Improve overall safety awareness.**
  - **Improve group performance.**

4. Whenever possible the Crew Boss should try to replace any fire expended items prior to leaving the incident.
  - a. **True**
  - b. False
  
5. Circle the items during return travel status that a Crew Boss is responsible for:
  - a. Arranging meals for crew personnel.
  - b. Providing lodging.
  - c. Checking in with agency dispatch office, regarding travel status.
  - d. Crew conduct.
  - e. Providing telephone use at scheduled rest stops.
  - f. **All the above**
  
6. List the steps necessary for demobilization of a crew from an incident.
  - **Obtain ICS 221 form from demobilization or planning unit.**
  - **Check out with each functional unit indicated on the ICS 221 and obtain the unit leader's signature.**
  - **Return ICS 221 form to appropriate unit.**

## **UNIT 7 – FINAL EXAMINATION**

### **INSTRUCTOR NOTES**

One hour will be allowed to complete the final examination. The students should feel free to use the Fireline Handbook, Incident Response Pocket Guide, and their student workbook.

There are 100 points possible on the final examination. Many questions ask for lists of items. If an answer is reasonable, credit will be given. In cases where a question is unclear, justification written beside the answer may also be given credit at the discretion of the instructor. Students must obtain 70% or higher on the final examination.



DETAILED LESSON OUTLINE

COURSE: Crew Boss (Single Resource), S-230

UNIT: 7 – Final Examination

TIME: 2 Hours

TRAINING AIDS: Personal computer with LCD projector and presentation software.

OBJECTIVE: Students must:

1. Obtain 70% or higher on the final examination to pass the course.

OUTLINE	AIDS & CUES
<b>TITLE SLIDE.</b>	07-01-S230-EP
<b>PRESENT UNIT OBJECTIVE.</b>	07-02-S230-EP
<b>HAND OUT FINAL EXAMINATION TO THE STUDENTS.</b>	07-01-S230-HO
<b>BRIEFLY REVIEW ALL TEST QUESTIONS ON THE FINAL. CLARIFY ANY CONFUSING INSTRUCTIONS AND/OR TEST QUESTIONS.</b>	
I. FINAL EXAMINATION INSTRUCTIONS	
A. Time	
Students will have one hour to complete the final examination.	

OUTLINE	AIDS & CUES
<p data-bbox="284 289 659 321">B. Reference Material</p> <p data-bbox="380 380 1084 453">The following reference material will be allowed for the examination:</p> <ul data-bbox="380 512 967 632" style="list-style-type: none"> <li data-bbox="380 512 751 543">• Fireline Handbook</li> <li data-bbox="380 554 967 585">• Incident Response Pocket Guide</li> <li data-bbox="380 596 761 627">• Student Workbook</li> </ul> <p data-bbox="284 688 475 720">C. Points</p> <p data-bbox="380 779 1118 1035">There are 100 points possible on the final examination. Many questions ask for lists of items; if an answer is reasonable, credit will be given. In cases where a question is unclear, justification written beside the answer may also be given credit at the discretion of the instructor.</p> <p data-bbox="190 1094 987 1167"><b>THE FINAL EXAMINATION ANSWER KEY IS LOCATED IN APPENDIX E, EVALUATIONS.</b></p> <p data-bbox="190 1226 967 1257"><b>II. STUDENT FINAL COURSE EVALUATION</b></p> <p data-bbox="284 1316 1094 1436">Hand out the student final course evaluation form (located in Appendix E, Evaluations). Students should complete the evaluation before leaving class.</p> <p data-bbox="190 1495 862 1526"><b>III. TRAINING COURSE EVALUATION</b></p> <p data-bbox="284 1585 1122 1841">The course coordinator and/or lead instructor should complete the training course evaluation form located in Appendix E, Evaluations. Completed forms are to be sent to the address shown on the form. The information provided is used for the future revisions and improvements of the course material.</p>	

# **APPENDIX A**

## **COURSE MATERIAL ORDERING INFORMATION**



## COURSE MATERIAL ORDERING INFORMATION

Crew Boss (Single Resource), S-230 is available for purchase through:

National Interagency Fire Center  
Attention: Great Basin Cache Supply Office  
3833 South Development Avenue  
Boise, ID 83705-5354

Consult the latest NWCG National Fire Equipment System Catalog, Part 2: Publications, NFES 3362 to obtain current ordering procedures and prices.

### Necessary components for presentation of the course:

NFES 2810	S-230 Instructor Guide
NFES 2812	S-230 CD-ROM Course Materials (contains instructor guide, student workbook, electronic presentations, topographic maps, and appendices)
NFES 2813	S-230 DVD*
NFES 2814	S-230 Video, VHS*
NFES 2815	S-230 Lesson 4C Topographic Maps (maps are laminated, 24" x 36")

\*Either the DVD or the VHS video can be ordered; they contain the same program.

### Provide each student with:

NFES 2811	S-230 Student Workbook
NFES 1077	Incident Response Pocket Guide (to be sent with the pre-course work package)

The student's home agency should provide the following publications:

- |           |  |
|-----------|--|
| NFES 0065 | Fireline Handbook, PMS 410-1   |
| NFES 2318 | Crew Boss (Single Resource) Position Task Book,<br>(if initiated, this is to be done at the home unit) |

Materials needed to present the course:

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|-----------|---|
| NFES 2810 | S-230 Instructor Guide<br>(one per instructor and one for the course coordinator)     |
| NFES 2811 | S-230 Student Workbook<br>(one per student)   |
| NFES 2812 | CD-ROM Course Materials<br>(one for course presentation)                              |
| NFES 2813 | Crew Boss DVD<br>(one for course presentation)  |
| or        |   |
| NFES 2814 | Crew Boss VHS video<br>(one for course presentation)                                  |
| NFES 2815 | Topographic maps<br>(one set for course presentation)                                 |
| NFES 0065 | Fireline Handbook, PMS 410-1<br>(extra copies for students or instructors)            |
| NFES 1077 | Incident Response Pocket Guide<br>(extra copies for students or instructors)          |
| NFES 2318 | Single Resource Boss Position Task Book<br>(extra copies for students or instructors) |

## CLASSROOM EQUIPMENT

The classroom should be able to accommodate up to 30 students with enough space to arrange the seating into groups for the exercises. An area (usually in the back of the room) should be provided for instructors and their materials.

- A computer with projector (LCD) and presentation software for electronic presentations.
- A DVD or VCR with monitor large enough to be viewed by the entire class.
- A white board with markers, chalkboard with chalk, or flip chart with paper and felt tip markers, for the instructors.
- Flip charts with paper, felt tip markers, tables, chairs, pencils, pens, and notebook paper should be supplied for the students.

